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TENTH ANNUAL REPORT

OF THE

BROOKLYN PARK

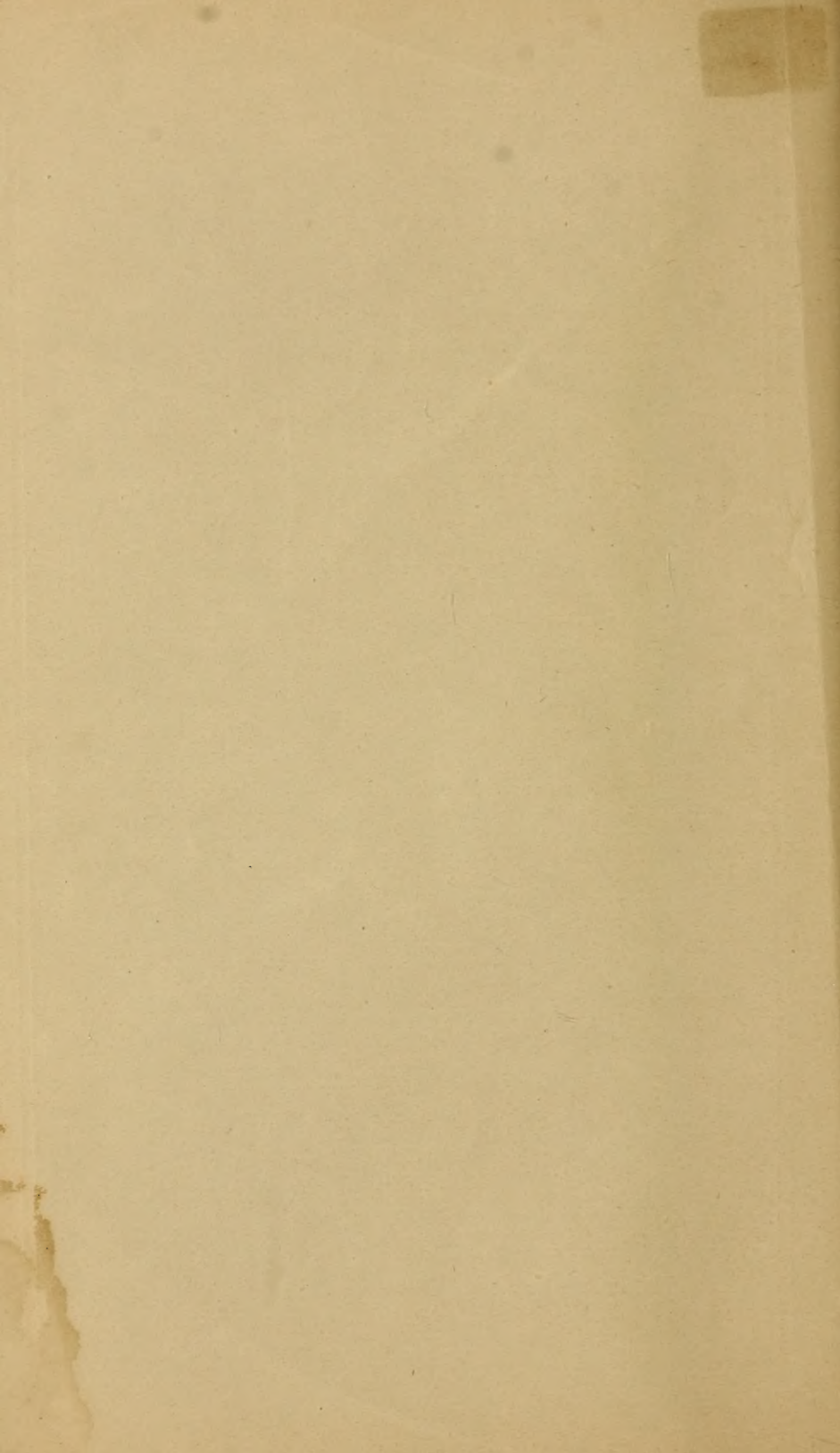
COMMISSIONERS.

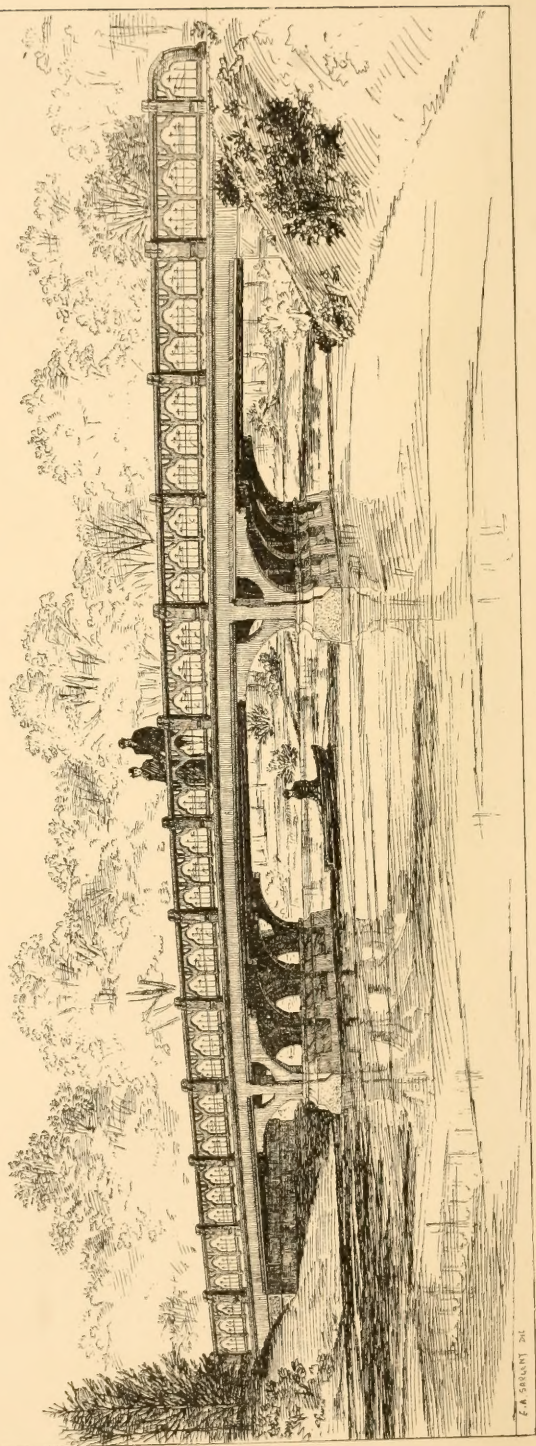
JANUARY, 1870.

BROOKLYN:

EAGLE PRINT, 30 AND 32 FULTON STREET.

1870.





LULLWOOD BRIDGE

OLMSTED, VAUX & CO LANDSCAPE ARCHITECTS

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OF THE

BROOKLYN PARK

COMMISSIONERS.

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THE BOARD
OF
BROOKLYN PARK COMMISSIONERS.

1869.

JAMES S. T. STRANAHAN,
WALTER S. GRIFFITH,
JOHN H. PRENTICE,
EDWARDS W. FISKE,
WILLIAM MARSHALL,

ABIEL A. LOW,
SEYMOUR L. HUSTED,
ABRAHAM B. BAYLIS,
STEPHEN HAYNES,
ISAAC VAN ANDEN,

MARTIN KALBFLEISCH, *Ex-of.*

President,

JAMES S. T. STRANAHAN.

Secretary,

JOHN H. PRENTICE.

Comptroller and Counsel,

JOHN N. TAYLOR.

Landscape Architects and Superintendents,
OLMSTED, VAUX & CO.

Assistant Architect,

EDWARD C. MILLER.

Engineer in Charge,

CHARLES C. MARTIN.

Assistant Engineers in Charge,

JOHN BOGART, JOHN Y. CULYER.

STANDING COMMITTEES OF THE BOARD.

EXECUTIVE COMMITTEE:

JOHN H. PRENTICE,
SEYMOUR L. HUSTED,
ISAAC VAN ANDEN,

WALTER S. GRIFFITH,
STEPHEN HAYNES,
EDWARDS W. FISKE.

FINANCE COMMITTEE:

ABRAHAM B. BAYLIS,
MARTIN KALBFLEISCH,

ABIEL A. LOW,
WILLIAM MARSHALL.

AUDITING COMMITTEE:

WALTER S. GRIFFITH,

JOHN H. PRENTICE,
ISAAC VAN ANDEN.

R E P O R T
OF THE
BROOKLYN PARK COMMISSIONERS.

*To the Honorable the Mayor and Common Council of the
City of Brooklyn :*

THE Brooklyn Park Commissioners respectfully submit to the Common Council of the City this report of their proceedings for the year 1869, with a statement of their receipts and expenditures for the same period.

Their last report referred to the proceedings of Commissioners who had recently been appointed by the Supreme Court to estimate the value of land added to Prospect Park at its Western angle, and suggested the hope, that their forthcoming report on damages, would be of such a character as to justify the Board in asking the Supreme Court to ratify and confirm the same. The report was soon afterwards presented to the Board, and awarded to the owners of land the damages sustained by them, amounting in the whole to one million seven hundred and five thousand two hundred and forty-eight dollars and thirty-two cents. This amount, however, included the expense of the proceedings, together with the expense of the subsequent proceedings to assess property adjacent to the Park for special benefit ; which yet remains to be done. Although the estimate

seemed large when compared with former prices, it was the result of a fair and impartial examination of the claims of the parties in interest, made by five of our most judicious and reliable citizens; and there was no question that the property had been greatly increased in value by its immediate contiguity to the Park, during the time that its acquisition had been unfortunately delayed by legislative inaction. The Board also considered the great importance, if not the absolute necessity of this addition to the Park, and did not therefore hesitate to accept the report of the Commissioners, and apply to the Court for its confirmation. The bonds authorized by law were at once issued by the City authorities, and met with a ready sale. The awards for land taken were promptly paid, and the Board forthwith entered into possession of the premises. In an artistic point of view this acquisition fully justifies the high expectations of its value originally entertained by the Board. And if we are to judge from the unqualified expressions of admiration with which the subsequent opening of the drive through these beautifully wooded and picturesque grounds has been greeted, the Board are well assured that public sentiment entirely approves of their action in this behalf.

The same Commissioners are now rapidly proceeding with the assessment which the law directs them to make upon property specially benefitted by the opening of the Park. And the Board have reason to expect that when that Commission shall have finished their work, Park indebtedness will have been very largely diminished. It is but justice to the Assessment Commissioners to add that they are engaged in an arduous and important work; that their operations extend over a large district of country, and that they have been prevented by the terms of the law from commencing their labors until after the confirmation of the last report on land taken for Park extension.

The Commissioners were much pleased to find that the subject of laying out streets and avenues through the County of Kings, so as to conform, as nearly as may be practicable and judicious, to the streets and avenues of our City, to which subject they have repeatedly called the attention of the Common Council, was acted upon by the Legislature at its last session. The present Supervisors of the County towns, in conjunction with the President of the Board of Supervisors, were appointed a Board of Commissioners for the purpose of maturing a permanent plan of improvement. That Board have since appointed an experienced Surveyor to make the requisite examinations, and to prepare a map of the streets and avenues upon a plan suggested by them; and it is understood that the result of their labors will soon be submitted to public inspection.

One of the most striking features of the new plan, bearing directly upon the interests of the Park, and of our City, will be found to be a noble avenue, two hundred and ten feet wide, stretching southerly from Prospect Park towards Coney Island, but terminating for the present at the newly established Fair Grounds. This avenue will form another grand approach to the Park, and is to be laid out under the liberal auspices of the owners of the land through which it passes, at their own expense, and has been placed under the control and management of the Park Commissioners.

This splendid improvement is similar to that which was formerly suggested by the Board, on the line of Sackett street, as a suitable approach to the Park from the East, and will soon be thrown open to public use; and when properly regulated, planted with shade trees, and extended to the ocean, terminating in a broad terrace upon the beach, as it must eventually do, will form a most attractive sea-side promenade and drive.

The enterprise of our neighbors has also placed another fine improvement in the hands of the Park Commissioners ; which consists in the widening of the Coney Island road to the width of one hundred feet ; thereby opening up a direct avenue to the sea, and at the same time throwing open to the public another opportunity of selecting sites for suburban residence unequaled for beauty of situation, for salubrity of air, and for convenient access to business centers by any locality on the Island.

By means of these and of other kindred improvements connected with Park extension, in which the Board have been engaged, land throughout the County of Kings has greatly increased in value, the taxable property in the rural districts having been nearly doubled during the last four years. While we rejoice with our friends in the country towns that they are the fortunate possessors of such valuable property, we heartily congratulate our citizens at large upon the splendid opportunities of improvement which are about to be thrown open to them. It is thus, in connection with those magnificent enterprises of bridging and of tunneling the East River, which have already engaged the attention of the Common Council, that the Board expect to realize those broad plans of public improvement which they have from time to time suggested by their annual reports and otherwise, as opportunity presented : and it is thus that they hope to establish for Brooklyn that reputation which she justly merits, of a highly favored quarter of the great metropolis of this Western world, possessing superior natural advantages in many respects over her more wealthy neighbor, but particularly as a healthful and desirable place of residence for her men of business.

The success of our Park enterprise, now so generally admitted, is believed to have contributed largely to the pro-

duction of the increased values to which the Commissioners have referred. On reference to the assessment rolls of the City's property, they find that since the commencement of active operations on the Park, there has been added to her tax list the large amount of \$77,232,410, the Board of Assessors having felt themselves justified by its very obvious increase, in adding 25 per cent. to the list of her taxable property for the year 1869. The amount of such property is now \$196,624,110, while in the rural districts it is \$11,808,933, making the total amount now standing on the Assessor's books, \$208,433,043; nearly two-fifths thereof having been added since the period above referred to. It should be observed, also, in order to a proper appreciation of these facts, that a large portion of this increase, to wit: the sum of \$32,820,059, has arisen in the Wards immediately surrounding the Park, including the town of Flatbush, thereby increasing the City's annual income nearly a million of dollars.

The rapid increase of our population, as well as the number of houses built for their accommodation, fully sustains the action of the Assessors. During the time referred to, our City has trebled its former annual rate of house building, and she has actually erected nearly one-half more houses within the last three years than were built in the City of New York. That our territorial expansion corresponds therewith, appears from the many miles of new streets opened, graded and paved within the past year; while more than eight additional miles of re-pavement, having an improved surface which supersedes the old fashioned cobble stone pavement, has opened up several direct and easy approaches to the Park. The population of our City, also, according to the statistics of the past forty years, has been found to double in rather less than twelve years; the increase of New York being at about one-half that

rate; so that, unless New York shall speedily absorb all the southern towns of Westchester, or unless some unforeseen check shall be given to our progress, we must expect to gain yearly upon her until we shall become the larger of the two cities; an event which, in the ordinary course of things, must occur before the close of the present century. Such a demand upon the respiratory and sanitary resources of our City has never yet occurred in the history of any people, and should convince us of the immense importance of securing Parks and open planted spaces of every description in advance, and wherever it may be practicable, as lungs for this great population.

But the question with which our City as a municipality is more immediately concerned, at this time, is not so much the numerical increase of her population as its character, chiefly in reference to its ability to pay taxes, and make the improvements we require. One of the chief difficulties under which we have labored, and still do labor, consists in the comparatively low valuation of our property. A house on 2,500 square feet of ground, worth perhaps only a thousand dollars, costs as much for the repair of streets, for lamps, police, and the other machinery of City government, as the house paying taxes on \$20,000. Our constant aim, therefore, should be to increase these valuations, by holding out such inducements to men of wealth and taste, in the way of improved streets, increased Park accommodations and other social advantages, as will make Brooklyn a more desirable place of residence for them than any other City.

It will be remembered that the present Park Commissioners, with two or three exceptions, were appointed in 1864. Upon their accession to office, they found that a fresh impetus had been everywhere given to Park enterprise by

the liberal views then recently adopted for laying out large parks in New York, Philadelphia and Baltimore; and our City's need of a first-class Park, could no longer be satisfied with the very moderate dimensions assigned to Prospect Park by the law of 1860. This necessarily led to a review of the whole subject of boundaries, including various questions of entries and approaches, as necessarily connected therewith. The plan of improvement also, as originally suggested, for reasons which do not now require any detailed statement, failed to receive the approval of the reorganized Board. No principal entrance, or none suited to the dignity of a large Park, had been provided, and they deemed it proper, therefore, to apply to the Legislature at once for authority to annex so much additional land as was necessary to form what now constitutes the Plaza.

Nor upon the question of boundaries could they satisfy themselves that the ground which had been taken was all that was required in respect to extent or opportunity of improvement; and least of all that the land on the east side of Flatbush Avenue, in consequence mainly of its isolated and disjointed character, could be made to harmonize in any tolerable degree with the fine Park land on the other side. They consequently proceeded to mature a plan which they thought better suited to the character of a first-class Park, which added very considerably to the dimensions of the original plan, but extended it in a direction in which land was cheapest, and fortunately best adapted to Park purposes, while it took nothing from our own taxable property. Their report upon this plan, with a full explanation of its details, and a map showing the contemplated change of boundaries, with the proposed abandonment for Park uses of the land east of Flatbush Avenue, was thereupon printed and extensively circulated throughout the community, and received a very decided and unqualified approval.

And the Commissioners here deem it worthy of notice in passing, that the map annexed to that report is the same design, without material alteration or addition, upon which the landscape architects of the Board have been working from the beginning of their operations, and upon which they still continue to work.

Being satisfied with the favorable expression of public opinion thus obtained, the Commissioners applied to the Legislature for the additional territory required to carry out their enlarged plan of improvement, at the same time asking for authority to sell so much of the land on the east side of Flatbush Avenue as was not embraced in the plan, in order that they might have means to pay for what they proposed to annex on the other side. They obtained a portion of the land required, but, much to their regret, were refused the fifty acres referred to in a former part of this report, and which constituted one of the prominent features of their design. Their request for permission to sell was also denied, although it had received the approval of the Senate, and is believed to have influenced that body in the passage of the bill for Park extension, which was acted upon by them on the same day.

After Park areas had been thus far extended, the Commissioners, hoping that the residue of the land required to carry out the improved plan would yet be conceded to them, deemed it expedient to commence the improvement. They began upon that part of the ground which was originally selected for a Park, and where their expenditures had been limited in amount: but it proved to be the most difficult, and consequently the most expensive to operate upon. Among other difficulties, it became necessary to accommodate the Park grades to those established for the surrounding streets of the City, which grades had recent-

ly been much reduced; and the transformation of the ground to meet these changes could only be accomplished at very considerable expense. The Commissioners however believe that the expenditure is not to be regretted; and they take this opportunity of expressing the opinion that the style and finish with which this as well as other Park improvements have been executed, have had much to do with the great increase in values to which they have above referred. It was not so much the fact that Brooklyn was to have a large Park, as it was the discovery that her Park was to possess an artistic beauty and finish equal to any Park extant, which was to sustain her in her competition with the Parks of other cities.

The Commissioners have claimed for Brooklyn the advantage of being a more desirable place of residence in many respects than New York, and they think it can be readily shown that she possesses finer sites for city residences, in connection with the refined enjoyments of a Park, than can be found in that city. She has even now, under her own control, a district of country, east of Flatbush Avenue, in the highest degree attractive, and which, if properly improved, would open up another large district Southerly and Easterly therefrom, to the immense advantage of our City, both socially and financially. But in order to develop these advantages fully, they think it will be necessary to revise the whole street plan of this quarter of the City, while it is yet under easy municipal control, and to lay it out anew in such a way as will not only be much more convenient and useful to the public, than it would be under any other plan yet suggested, but must make it perfectly apparent that we have, in Brooklyn, in close connection with our Park, more desirable places of residence than can be found elsewhere in any city. The lower portion of the map which is annexed to this report will further explain this

last suggestion of the Commissioners, while it also indicates the location and extent of land which they propose to sell.

If sold, it would of course be with proper restrictions in regard to the character of the improvements to be made upon it, and with suitable reservations of streets and avenues. The Commissioners intend to reserve, besides the avenues which they propose to lay out with wide planted borders, and the Reservoir ground, with an ornamental garden around it, a body of land two hundred and sixty feet in depth fronting the Park, to be held by the City as a site for public buildings and institutions, as stated in their last annual report.

They do not propose to interrupt, but to improve and amplify all the direct lines of communication through the district east of the Park, retaining for Park purposes every foot of land from which a view of the bay or of the sea can be had. But after making all these reservations, there will still remain a body of over one hundred acres of land, to be disposed of with such restrictions as will insure the erection upon it of strictly first class dwelling houses. A former report estimated the proceeds of such sale at two and a half millions of dollars; but the Commissioners are advised that their estimate was too low by at least half a million of dollars. If to this is added a million for its improvement when retained as a Park, which the experience of the Commissioners in dealing with ground of a similar character on the other side of the avenue, induces them to believe would be a fair estimate of the expense, the difference to the City between selling and retaining this land, will amount to at least four millions of dollars. But this is not all: for if we double the price of the land as a fair representation of the value of the buildings which would probably be erected upon it, we shall add immensely to the taxable property

of our City, besides increasing her annual revenue by at least half a million of dollars.

The general views upon the subject of a sale here presented, were more fully expressed by the President of this Commission, at a public discussion of the matter to which the Park Commissioners invited their fellow citizens last Spring, at the Court House: and they now append a copy of the statement then made, respectfully soliciting a candid consideration of the arguments therein contained.

With regard to the ability of the City to make a good title to the land proposed to be sold, the Commissioners entertain no doubt. When this land was first taken and it became necessary to raise money for the payment of awards, City bonds were issued and put upon the market for sale. The chief security for these bonds consisted in a statutory lien upon the Park; and it was objected by capitalists that, for as much as the City had not the fee of the land, but took merely an easement similar to that by which a street is held, if the holder of the security should be compelled to realize, he could have no permanent possession of the land, since it would revert to the owner of the fee as soon as it ceased to be used for Park purposes. In this respect, the security was found to be inferior to that of the City's water bonds, where the entire property of the department, including reservoirs, pipes and hydrants, is pledged for payment. In order, therefore, to furnish a new credit for Park bonds, which should make them equal in this respect to the water bonds, an Act of the Legislature was passed in the Spring of 1865, authorizing proceedings to be taken for the purpose of transferring the ultimate fee of the land to the City. Such proceedings were accordingly had, the residuary interest of the owners was valued by Commissioners appointed by the Supreme Court, and payment made to the parties. This

payment necessarily included the whole value of the inheritance, leaving nothing further to be paid to the owners, at any time or under any circumstances. It was the full market value of the land at the time, and no objection was ever made to such valuations by the parties in interest.

The validity of a similar Act of the Legislature was fully sustained by the Court of Appeals, in this State, in the case of *Haywards Executors*, against the City of New York, (7, N. Y. R., 486,) where a portion of the Almshouse grounds, which the City had taken for public purposes, was sold under similar circumstances. The Court held, in that case, not only that the Legislature had power to authorize a municipal corporation, to acquire a fee simple title to the lands of private persons required for public purposes, upon the payment of a just compensation, to be fixed by Commissioners appointed by the Court; but that when so acquired, no reversionary estate or interest remained in the former proprietors. It held, furthermore, that if the public exigencies required the subsequent conversion of lands thus acquired to some other purpose than that for which they were originally taken, they might be so converted and sold without any accountability to the former proprietors. And this decision appears to the Commissioners to be manifestly equitable and just: for, if when the particular object for which the land was taken had ceased to exist, it should by any operation of law be allowed to return to the owners, they having received full compensation for their relinquishment of it to the public use, it must necessarily follow that they would not only have their land again, but its price also. No one, we think, will fail to see the iniquity of such an extraordinary result as is here suggested.

The owners, then, having received payment in full, and the fee of the land being absolutely vested in the City, the

Commissioners are satisfied that, if the Legislature concur in a sale, there can be no difficulty in making title. There is, of course, no longer any other outstanding interest, unless it be that of the bondholders; and their interest will be effectually protected by placing the whole proceeds of sale in the hands of the Commissioners of the Sinking Fund, for the redemption of their bonds.

As part of the history of our proceedings during the year, we are here obliged to refer to a proposition made to the Board, on the part of some gentlemen residing in the Ninth and Twentieth Wards of the City, to enter into a contract with them for the improvement of this portion of Park land. Their proposal, with the report of the Committee to whom the matter was referred, is appended to this report, and fully explains the reasons of the Board in declining to enter into such a contract.

The Commissioners cannot take leave of this subject without again expressing their thorough conviction of the propriety, if not the necessity, in view of the City's extended financial obligations, of making a fresh disposition of the land on the east side of the Avenue, so that it may be laid out and sold under their direction, in a way which they think will not only benefit the Park by giving it proper approaches from the North and East, but will, at the same time, add largely to the value of property in its vicinity, and establish the secular character of this whole quarter of the city upon an entirely new basis.

During the past season, the work of construction has gone forward upon all the Parks under the control of the Commissioners, with as much rapidity as was practicable, and they respectfully refer to the reports of their landscape Architects and Engineers, which are hereto annexed, for a

full detail of the various operations in which they have been engaged. The whole area under treatment, thus far, is 352 acres in Prospect Park, and 30 acres on Washington Park. 255 acres of the former Park, consisting of woodland shrubbery and meadow, with the intervening roads, walks and waters, are now complete. The finished drives extend over a space of five miles in length, and the bridle paths an equal distance. Of finished walks, we have over five miles, with four additional miles in progress. And the construction of the whole design, with a slight exception, may now be said to be complete east of a line drawn through the middle of the Park. Work is more or less advanced over the entire residue of the Park, and the greater part of it can, in the opinion of the landscape architects, be readily placed in a condition suitable for public use, in the course of another season.



RUSTIC BUILDING NEAR THE ENTRANCE.

One of the most interesting incidents of the year's progress has been the completion of the great well and water-works connected therewith. A full description of this fine specimen of engineering skill, and of the very satisfactory results which have been obtained, will be found in the able report of Mr. Martin, the Engineer-in-Chief. The Board have now no doubt that the supply of pure spring water from this source will be amply sufficient to keep the extensive ornamental waters of this Park in a good healthy condition, independent of any other supply.

The work on Washington Park has been diligently prosecuted, and its interior improvement is now so nearly complete as to justify the erection of the stone wall which is now engaging the attention of the architects, and will speedily enclose this popular resort. A tasteful design for the vault to be erected in this Park, for the reception of the remains of the Prison Ship Martyrs, has been prepared and is under advisement by the Board. The matter will continue to receive that degree of consideration which it so justly deserves.

Tompkins Park, which is laid out in a rapidly growing quarter of the City, was recently placed under the charge of the Board; but no provision seems to have been made for its improvement; and the Commissioners have consequently been unable to do anything further than to protect the property from depredation. They trust, however, that authority will be given by the present Legislature, to raise money sufficient to improve this Park in a style corresponding with the other small Parks of Brooklyn.

The Parade Ground is now in complete order, and has during the last season witnessed some of the finest displays

of our citizen soldiery ever exhibited in Kings County. In addition to the trees planted and roads worked, a substantial shelter-house with suitable accommodations for the military on parade days, has been erected on the ground; the main building being forty feet square, with wings extended to the distance of sixty-four feet on each side.

During the past year nothing of any importance has been done towards the improvement of the City Park. It is in fact, becoming every day more evident, as the superior attractions of Washington Park are being developed, that the City Park is not likely for some time to come to be used to any extent as a pleasure ground. When the population of that quarter of the City shall have crowded Washington Park beyond its capacity, and shall require greater Park facilities than are now afforded by its beautiful slopes and hills, or when our City's debt shall have been brought within such easy and reasonable proportions as shall cease to be a serious burden to our tax payers, the discussion of the best method of fitting up the City Park as a place of amusement may be resumed with advantage: but at present the Commissioners deem it unwise and impolitic to expend upon it that amount of money and of labor which would be required to render it at all suitable for such a purpose.

It may be many years before the public accommodation will justify such an expenditure: but in the mean time the property may and should be put to some profitable use. Its advantages as a market site were set forth in a former report of these Commissioners, and need not here be repeated. Public opinion seems fully to have endorsed their recommendation to use it for the purposes of a general public market; and they hoped that some action of the

Common Council would ere this have resulted in the establishment of that much needed public accommodation. But no such movement having been made, they think they should no longer delay to act upon that requirement of the law which placed this Park under their supervision, and renders it obligatory upon them to suggest to the Legislature such further legislation in regard to all the Brooklyn Parks as they shall deem advisable. They intend, therefore, to lay the whole subject before the Legislature at its present session, and to suggest the use of this Park for a public market, until it shall be found expedient to resume its use as a Park, believing that an economical plan of improvement may be adopted, which will greatly enhance the value of the surrounding property, and be at the same time productive of a handsome revenue to the City, which may be devoted to the improvement and maintenance of the other City Parks, or used in liquidation of general Park indebtedness, as may be deemed most expedient.

The unveiling of the Lincoln statue erected upon the Plaza of Prospect Park by the dollar subscriptions of our people under the management of the War Fund Committee of Kings County, formed an epoch in the history of our City, as well as of our Park, and gave occasion to an interesting display of taste and of patriotism. A. A. Low, Esq., officiated as the presiding officer, and delivered the opening address; after which the statue was duly presented by James P. Wallace, Esq., on behalf of the Committee, and was received by the President of this Commission in terms befitting the occasion. The several addresses made by these gentlemen will be found appended to this report; but the Commissioners regret that they are unable to include the admirable address of the Rev. Dr. R. S. Storrs, which was delivered at the same time in honor of the event.



EASTWOOD ARCH.

A financial statement of the receipts and expenditures of the Commission for the current year forms part of this report, and is applicable to the construction of all the smaller City Parks, as well as of Prospect Park. It includes, also, a detail of the expenditures upon each Park, with the object of such expenditure. In addition thereto will be found a statement of the fund for the general maintenance of the Parks now under the charge of the Commissioners, which was levied in the tax of the previous year and placed in their hands for that purpose. The amount received on this account, it will be seen, was not sufficient to defray the expenses of the year, and the deficiency must necessarily be made up temporarily from the maintenance fund of the year 1870. When the requisition for this fund was made upon the joint Board of Common Council and Supervisors, as authorized by the law of 1868, it was, of course, in advance

of the expenditure, and with an uncertainty as to the particular amount which would be required for the purpose, the Board having up to that time no specific data upon which to base their estimate. But experience has shown that their former estimate of the expense of maintaining the Parks was too low, and that for the future the amount which will be required to be raised for maintenance will not be less than the whole sum authorized by law to be expended on this account.

It will be observed, also, that the fund for the construction of Prospect Park has now reached the limit assigned to it by the law of 1868, and as an application must be made to the Legislature for additional means with which to finish this Park, it may not be improper to glance at the history of past legislation, as connected therewith. The law of 1860, which organized the first Board of Commissioners and gave form and feature to the original Park enterprise of our City, directed that no plan for the improvement of the land thereby placed under their charge should be adopted or undertaken, of which the entire expense when funded would require for the payment of its annual interest a greater sum than \$30,000 per annum. This amount was slightly modified by the amended Act of the next year, which limited the cost of improvement to \$500,000, and was adapted to the simple and inexpensive style of improvement originally suggested for this Park. The restriction, of course, applied only to the comparatively small portions of land lying in the vicinity of Flatbush Avenue, as contemplated by the Act of 1860, and had no reference to the enlarged Park which was subsequently placed under the charge of the reorganized Board. In their first expenditures of money the Commissioners confined themselves to this amount so long as they were operating upon land within the original Park boundaries; but by the Act of

1866, which extended the Park area to very nearly its present dimensions—228 acres having been added—a new and entirely different style of improvement was adopted, requiring the expenditure of more money. The former restriction was accordingly removed and the Commissioners were authorized to expend such reasonable amounts for improvement as should be found necessary, and the City authorities were directed to issue bonds and furnish means upon the requisition of this Board, in the same manner as they had been directed to do under the former Act. This arrangement continued until 1868, when the improvement fund was limited to three millions of dollars, including the bonds which had been previously issued.

This limit, as we have said, has now been reached; but a very considerable portion of the Park, including the fifty acres recently annexed, yet remains to be improved, and the Commissioners will be obliged to suspend further operations until the Legislature shall have provided means for its completion. As to the exact amount which will yet be required for this purpose, the Commissioners can make no very definite statement. A fine work of art, such as the regulation and embellishment of a Park of this description, cannot properly be executed by contract, but in the judgment of the Commissioners the amount required will not exceed two millions of dollars.

Before closing their report it may not be uninteresting to the taxpayers of our City for the Commissioners to state the extent of the burden which Park enterprise now imposes upon our City. The amount awarded for land first purchased for Prospect Park, on the 15th of June, 1864, in-

cluding expenses, as appears from the official report filed in the County Clerk's Office, was . . .	\$1,387,606 27
For the second purchase on the 5th Feb'y,	
1866,	158,558 40
For the third purchase on the 27th May, 1867,	752,745 02
And for the fourth and last purchase, on the	
13th of April, 1869,	1,705,248 32
	<hr/>
Total,	\$4,004,158, 01

From this deduct the amount awarded to the City for a strip of land, thirty feet wide, taken from the Park for the widening of Vanderbilt Avenue, and paid into the sinking fund to be applied in the redemption of Park bonds,

	28,509 60
	<hr/>

and the present cost of all the land purchased will be

	\$3,975,648 41
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If to this we add the amount authorized to be expended for improvement,

	3,000,000 00
	<hr/>

the total indebtedness of the City at this time, on account of this Park, will be \$6,975,648 41

But no solicitude need be felt by our citizens on the score of expense. In a merely pecuniary point of view, and without regard to the immense social and moral considerations involved in the possession and use of such a Park, the acquisition of the property is proving, as we have shown, a splendid investment for the City; and every dollar now expended upon it will add to its permanent value. This property has cost, say seven millions of dollars; but if sold to-day it would realize more than enough to pay the whole debt of the City; and long before the bonds issued for its purchase shall have matured, it will, in all probability, be

worth ten times its cost, besides giving an impetus to property in its neighborhood that will afford a tax more than sufficient to pay the interest on its cost, and liquidate the entire debt at maturity, without adding anything to the general taxation.

Dated January 11th, 1870.

JAS. S. T. STRANAHAN,
PRESIDENT.
JOHN H. PRENTICE,
SECRETARY.

JOHN N. TAYLOR,
COMPTROLLER.

AN ABSTRACT OF THE FINANCIAL STATEMENT

OF THE

BROOKLYN PARK COMMISSION,

FOR THE YEAR 1869.

CONSTRUCTION ACCOUNT.

The total receipts on account of PROSPECT PARK during the year 1869, were:

Balance of cash in Bank, January 1st.....		\$40,223 78
Received from Treasurer of the City.....	\$740,000 00	
“ “ Rents of houses in the Park	6,142 01	
“ “ Sales of old houses.....	2,022 00	
“ “ Wood, grass and old material	1,193 62	
“ “ Interest on Bank balances...	5,519 91	
“ “ Lost tools.....	2 40	
“ “ Park Pound.....	568 00	
“ “ Labor furnished Contractor..	309 36	
“ “ Parade Ground for improving Franklin Avenue.....	4,613 32	760,370 62
		<hr/>
		\$800,594 40

The total expenditures on this Park for the same time were:

Paid Salaries, Comptroller, Superintendent, Landscape Architect and Engineers	\$ 25,666 30	
“ Surveyors, Draughtsmen and Assist- ants	28,521 50	
“ Laborers, Mechanics, horses and carts	501,651 58	
“ Materials of construction, tools and instruments.....	162,871 52	
“ Stationery, printing and drawing ma- terials.....	4,527 24	
“ Fitting up offices, rent and repairs....	3,385 04	
“ Trees, plants and shrubs.....	7,099 15	
“ Manure and other fertilizers.....	1,031 18	
“ Water-pipe and hydrants.....	15,532 51	
“ Drainage-pipe.....	3,420 42	
“ Patent pavements.....	12,974 52	766,680 96
		<hr/>
“ Balance to credit of Prospect Park, De- cember 31, 1869.....		33,913 44
		<hr/>
		\$800,594 40

The total receipts and expenditures on account of WASHINGTON, CARROLL, CITY HALL and CITY PARKS, were:

Balance of cash, Jan. 1st.....	\$46,973 47
Transferred from City Hall Park to main- tenance.....	121 66
	<hr/>
	\$47,095 13

THE TOTAL EXPENDITURES WERE, ON WASHINGTON PARK :

Paid Surveyor and Assistants.....	\$3,937 28
Materials of construction and tools	6,309 95
Manure.....	971 82
Drainage-pipe.....	908 30
Laborers, horses and carts.....	33,397 36
Trees, plants and shrubs.....	1,834 09
Patent pavements.....	4,048 01
	<hr/>
	\$51,406 81

CARROLL PARK :

Materials of construction and tools.....	280 52
Laborers, horses and carts.....	311 24
Manure.....	7
Trees and plants.....	64 54
	<hr/>
	663 30

CITY PARK :

Laborers, horses and carts.....	44 27
	<hr/>
	\$52,114 38

PARADE GROUND :

The total receipts on account of the PARADE GROUND, during the year 1869, were:

Balance of cash in Bank, January 1st.....	\$ 4,425 43
From City Treasurer.....	13,630 00
	\$18,055 43

The TOTAL EXPENDITURES for the same time, were:

Paid Surveyors and Assistants....	\$ 405 28
“ Materials of construction.....	2,788 71
“ Keepers, Mechanics, Laborers and teams	4,510 69
“ Regulating and grading Franklin Av..	4,613 32
“ On account of lodge and shelter.....	6,500 00
	<hr/>
	\$18,818 00

MAINTENANCE ACCOUNT.

Received from the City for the maintenance of all the
 Parks..... \$68,400 00
 Expended on the same Account;

For	Prospect.	Washington.	Carroll.	City.	City Hall.	
1. Roads.....	\$7,433 69	.....	.....	.....	.....
2. Walks.....	628 38	467 18	104 37	109 99	109 19	
3. Structures..	393 57	3 51	13 91	510 95	21 93	
4. Plantations.	16,660 96	1,947 61	214 13	48 36	231 37	
5. Water.....	5,148 06	348 33	17 00	.....	.....
6. Drainage...	1,254 89	34 84	8 10	.....	1 48	
7. Ice.....	1,951, 89	.....	.....	.....	.....
8. Tools.....	77 99	55 59	.....	.....	.....
9. Keepers....	42,962 29	2,115 74	1,028 17	342 21	.....
10. General....	2,927 90	15 18	23 87	.....	6 70	
Total	\$79,439 62	\$4,987 98	\$1,408 55	\$1,011 51	\$370 67	\$87,218 33

Deficiency of maintenance for 1869.....\$18,818 33

EXPLANATION OF THE FOREGOING STATEMENT.

1. ROADS.—Under this head are included repairs of road beds, breaking stone for roads—gravel, or other surface dressing—rolling same, and repairing and cleaning silt basins, used on roads.
2. WALKS.—Includes similar items, so far as applicable to walks.
3. STRUCTURES.—Includes everything necessary to keep bridges, buildings, and all other structures in repair.
4. PLANTATIONS.—Includes the care, dressing and manuring of grass plants and trees, the rolling of lawns, and cutting, curing and removing of grass.
5. WATER.—Includes the care and cleaning of the ornamental waters of the Park. Expense of Ridgewood water, steam engine, and repairs of water-works, hydrants, pipes and fountains, and the distribution of water for drinking, and the sprinkling of roads, walks, and watering trees and plants.

6. **DRAINAGE.**—Includes all expenses appertaining to the general system of sewers and basins, (except those used in roads and walks), and everything required for carrying off surface water.
7. **ICE.**—Includes the care of ice, cleaning, planing, and illuminating at night, with the erection of houses to accommodate the public during the winter.
8. **TOOLS.**—Includes the making and repairing of implements of all kinds used on the Park.
9. **KEEPERS.**—Includes wages and uniforms, and all other expenses incident to this department.
10. **GENERAL.**—For a class of expenditures not properly chargeable under any of the preceding heads.

RECAPITULATION OF ALL THE EXPENDITURES OF THE BROOKLYN
PARK COMMISSION.

	1865.	1866.	1867.	1868.	1869.	Total.
Prospect Park.	\$17,780 90	\$195,701 10	\$973,903 60	\$1 078,645 12	\$766,680 96	\$3,032,711 68
Washington Park.			1,851 86	73,835 09	51,406 81	127,093 76
Carroll Park.			1,810 56	16,716 98	663 30	19,190 84
City Hall Park.				1,343 03		1,343 03
City Park.			558 44	367 98	44 27	970 69
Maintenance.					87,218 33	87,218 33
Parade Ground.			250 68	8,772 89	18,818 00	27,841 57

JOHN N. TAYLOR,

Comptroller.

REPORT

OF COMMITTEE ON THE OFFER OF EDMUND DRIGGS AND OTHERS

TO IMPROVE THE LAND EAST OF FLATBUSH AVENUE.

PROPOSAL

To the Board of Commissioners of Prospect Park:

GENTLEMEN:—

During the recent meetings and investigations you and your engineers estimated the expense of improving the 137 acres of Prospect Park, lying East of Flatbush Avenue, at from \$1,500,000 to \$2,000,000. The undersigned believe the estimate to be exaggerated, and that such exaggeration may have a tendency to prejudice the public against the restoration and improvement of this portion of the Park lands. We therefore offer to lay out and improve this land not including fences or bridges, over, or tunnels under Flatbush Avenue, under the management and supervision of Genl. Egbert L. Viele, or some equally competent engineer, and in accordance with the plan presented by him, for a sum not exceeding \$625,000. Roads to connect with the present roads lying west of the Avenue, and will add over bridge of Flatbush Avenue, of elegant construction, and a tunnel under the Avenue for a further sum not exceeding \$150,000. These sums are the extreme limit of expense, but we will fulfill our proposition for the actual cost of the work, we will furnish adequate security for the performance of our undertaking.

This offer will be open to your acceptance until the first day of July 1869.

Dated May 22d, 1869.

Yours respectfully,

EDMUND DRIGGS.

J. W. HUNTER.

CHARLES JONES.

WM. W. GOODRICH.

J. CARSON BREVOORT.

R E P O R T .

The Committee to whom was referred the communication of Messrs. Edmund Driggs, Jno. W. Hunter, Charles Jones, Wm. W. Goodrich and J. Carson Brevoort, under date of May 22d, 1869, by which they offer to improve so much of Prospect Park as lies East of Flatbush Avenue, at a cost of \$775,000, under the engineering of Mr. Egbert L. Viele, or some equally competent engineer, according to a plan which was suggested by Mr. Viele, in 1860, respectfully report :—

That there seem to be many obvious reasons why the Board should not accept this proposal.

In the first place it is to be executed under the supervision of gentlemen who have not yet been appointed Commissioners, and without regard to the fact that there is already a Board of Improvement Commissioners, who must continue to discharge their duties until their successors in office are appointed. Next, they in effect designate Mr. Viele as engineer; but the Board is not yet prepared, we think, to substitute him in place of the skillful and experienced engineers who are now in charge of Park improvement. And furthermore, they propose to improve the land according to Mr. Viele's plan—a plan which is not in harmony with the present Park design, and which has not been adopted by the Board nor approved of by the people.

There are other serious objections to the proposition of these gentlemen. They evidently require too much money for the work they propose to do. The Board's estimate of the cost of improving the East side of the Park, as stated at the public meeting of citizens in April last, to which their communication refers, was one million of dollars, and not from one and a half to two millions, as stated in the proposal. It also included two bridges and the necessary fencing, with all such other equipments as are required for a place of public resort; while their estimate includes no fence, and only one bridge with a tunnel. If we add the cost of an enclosure with an additional bridge, their offer will be carried up from \$775,000 to over a million. But while the Committee think the charge is too high, they are pleased to find in it a confirmation of our own estimate, that this improvement would cost over a million of dollars.

The proposal, moreover, is premature. It has not yet been determined that the area of land now in the course of improvement on the

West side of the avenue, is not sufficiently extensive for a Park, or that it is not of convenient access to the masses for whose use it is designed. If so, then neither the necessity nor the expediency of improving the Eastern side in addition to the other, and of thereby permanently abstracting from our City's domain a large amount of taxable property is by any means certain. In the judgment of the Committee this improvement ought not to be made; and they believe the opinion of those who have to pay for public works—the taxpayers of Brooklyn—is decidedly against its being made. This Board has repeatedly expressed its opinion to the same effect, in its annual reports, giving the reasons therefor at length.

In the address of the President at the public meeting above referred to, which was afterwards published in our local newspapers, it was stated that after retaining the Reservoir ground, with its beautiful prospect, and a very considerable area for the accommodation of public buildings and institutions, besides opening up a broad system of approaches to the Park, Eastward from Flatbush Avenue, the residue of the land on the same side could be sold for three millions of dollars; and that by saving another million which it would cost to improve this section as a Park, and adding it to the three millions for which the land could be sold, a saving of four millions of dollars would be effected, besides returning a large amount of property to the books of the tax collector.

The Committee think that, with the present great burden of public debt and taxation resting upon our city, the saving of this large sum of money would be a sound and wise economy; and they believe that all thoughtful and prudent men, who are not biased by their ownership of a large real estate on the Eastern side of the Avenue, will concur in this opinion. The Committee cannot recommend the Board to fly in the face of an enlightened public judgment, by proceeding to do, upon the suggestion of a few interested persons, what would render the saving of these four millions impossible.

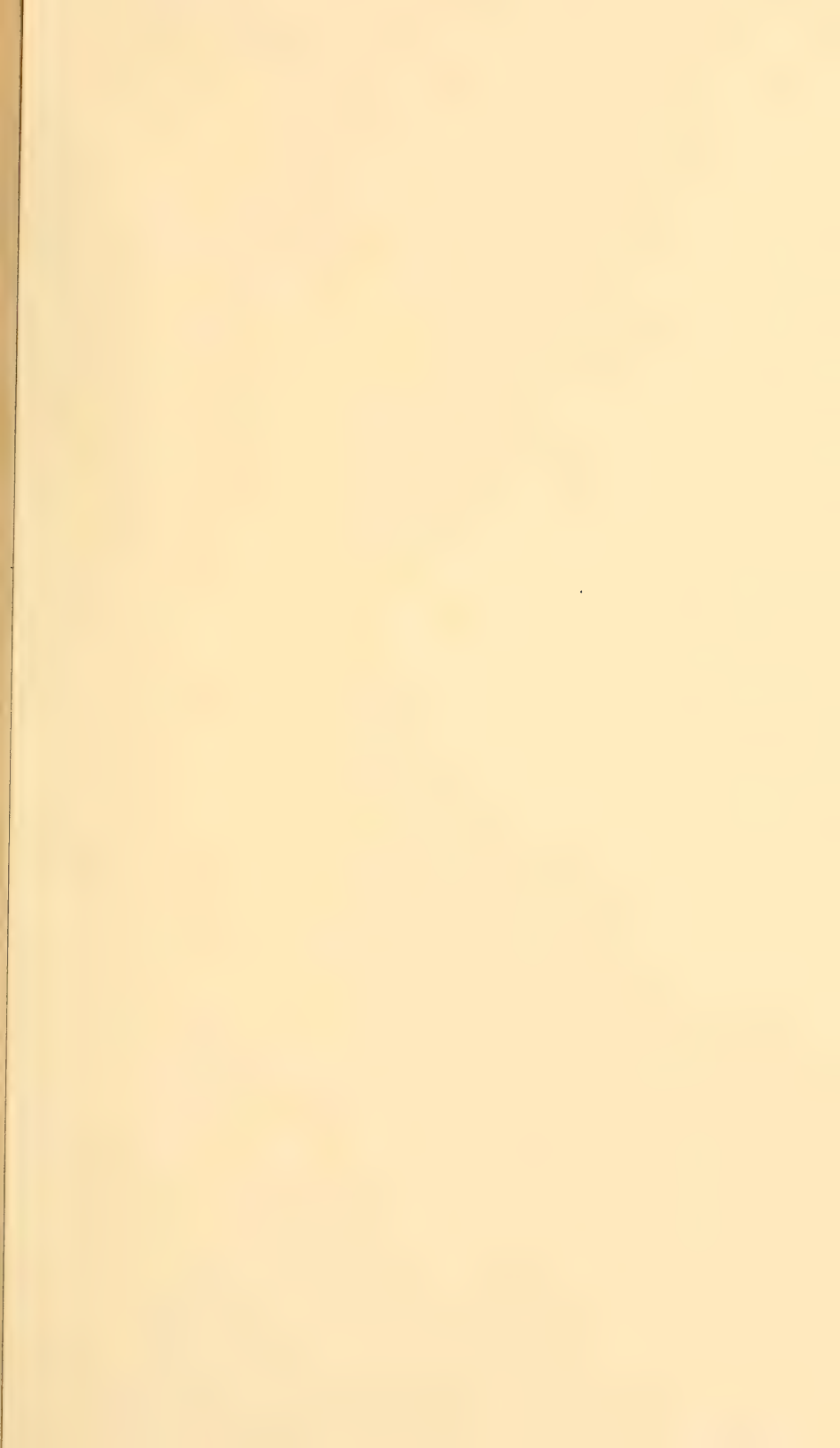
There is, it is said, a diversity of opinion on this question of spending or of saving four millions. But those who differ, belong mainly to two classes of persons. One class own land in the vicinity of the proposed improvement, and think their land will be greatly enhanced in value by spending some millions of money to bring the Park to their doors. While we do not concur in the opinion, believing that even their interest will be better served by using this land for the erection of fine

residences than by retaining it for Park purposes, we can readily see why they should be so strenuous to have this money spent, and not saved. The other class is the large body of tax-paying citizens, who think that a great public Park ought to be constructed at the cost, and for the benefit of the whole city, and not for the benefit of a mere locality in its neighborhood.

Incidentally the land in the vicinity of this Park has been greatly increased in value, from its proximity thereto: but when those who have received this advantage insist upon charging another four millions of dollars upon the tax-payers, in order that their large gains may be swelled to still larger proportions, those who have to pay object. They are willing to spend and to pay what the best interests of the city, as a whole, may require; but they are not willing to spend more than this for a local, as distinguished from a general, public advantage.

For these reasons, some of which have been already more fully set forth in the published reports of the Board, the Committee recommend that the offer of Mr. Driggs and his associates be declined.

Dated June 28th, 1869.



DESIGN FOR
PROSPECT PARK
IN
THE CITY OF BROOKLYN

OLMSTED, VAUX & CO.
LANDSCAPE ARCHITECTS, 110 BROADWAY, N.Y.
1870



ADDRESSES

DELIVERED AT PROSPECT PARK, ON THE 21ST OF OCTOBER, 1869,
ON THE OCCASION OF THE DEDICATION OF THE LINCOLN MONU-
MENT.

MR. LOWE'S ADDRESS.

Mr. Low said:

FELLOW CITIZENS:—In the eventful year 1865, the “War Fund Committee of Brooklyn” resolved to signalize the close of their voluntary labors by erecting a monument to the memory of the lamented patriot and martyr, by handing down to posterity, in truthful outline, the form and features of the great man who had successfully guided the destinies of our country through its most perilous crisis—thus bringing art to the aid of history in immortalizing the name of Abraham Lincoln.

It was at once determined to raise the necessary funds by a small but general subscription. An appeal, accordingly, was addressed to the people, and the people responded gladly. Circumstances favored the movement. A sentiment of gratitude, tempered by a feeling of the profoundest sorrow, wrought upon the hearts and will of all.

The struggle for the nation's life was over. The flag of the Union everywhere waved in triumph, and the return of peace was hailed with universal delight. While transports of joy, and the cheers of the loyal, were resounding throughout the North, the death of the President was unexpectedly announced, and the shout of triumph was changed into a wail of mourning! The people wept!

And now the lessons of the war were rehearsed anew. The providence of God in the events of the war was in every mind and on every tongue. Memory recalled the time, less than five years before, when a man, in stature like unto Saul, was summoned from an obscure sphere in life, to fill the highest office in the gift of the people.

The popular vote had been cast amid forebodings of evil, and the future was to witness their worst realization. The President elect would be the head of the Army and Navy, and few of all the people knew their appointed leader. The foes of the Union were exultant. War speedily followed the inauguration; and at the close of the war

a name so lately unknown had become illustrious in the annals of our country. The fame thereof had spread throughout all the nations of the world; and when tidings of Abraham Lincoln's death went forth, words of confidence and eulogy came back from courts and kingdoms in such measure as to fill a capacious volume. The compilation forms a priceless treasure in the Department of State at the Capitol of the Nation.

And thus it came to pass that as, in the earlier days of the Republic, God raised up Washington to be, as he was justly styled, "the Father of his Country," so, in these later days, God raised up Lincoln to be our country's deliverer. Washington gave to the States of the Union independence and a standing among the nations. Lincoln put down a formidable rebellion, turned away the curse of slavery, and left the States united and free.

Lincoln was the Providential man of our own time, and to perpetuate his memory is our grateful duty; to raise a statue to the honor of his name is a just tribute of affection to the worth and wisdom of the lamented patriot, who died, as he had lived, for his country! We thus manifest our gratitude to God for His gift of a life so precious.

The delay which has occurred is not to be misunderstood as manifesting a want of zeal on the part of the Committee who have had the work in charge. It was early committed to one of your gifted townsmen, was long since perfected, and has been waiting the convenience of the Park Commissioners, under whose direction the pedestal has been prepared on which the statue is henceforth to stand. It seemed to be most fitting and proper that on this spot, destined ere long to be the centre of a vast city, this monument should be erected; that all our citizens who gather from time to time in this Plaza, and look upon the form and features of this central figure, may be led to ponder the example of the great original; to recall, with gratitude, the good he did, and the impress he made on his age and generation; that here beneath this statue, before entering upon paths of pleasure now opening to our view, the vow may be renewed by all faithfully to maintain and loyally to uphold the Union and the Government established by our Fathers.

Let us hope that, as the waters which supply the fountain by our side, whose source is far distant, are made to flow out and penetrate

every house and home in our city, so there will go forth from this spot, hallowed by precious thoughts and memories, an influence that shall animate and strengthen all hearts; that this influence may descend from generation to generation, advancing whatever is worthy of emulation in the past or present. And so our work of to-day shall be blest.

From the lips of another you will presently be called to contemplate the influence exerted upon our own age by the life and death of him whose virtues we seek to commemorate—whose loss we cease not to deplore. The same voice, always welcome to our ears, was heard not long since in glowing eulogy at the funeral obsequies of the departed.

We have come here to-day by invitation of the War Fund Committee, to take part in the consummation of this long cherished purpose, to celebrate with appropriate ceremonies the unveiling of the statue of our late lamented President, Abraham Lincoln.

The President of the United States, the Governor of the State of New York, the Mayor and Common Council of our city, Judges of the respective courts, officers of the army and navy, soldiers and sailors who shared in the perils and in the glories of the war, and all who contributed to the erection of this monument, have been asked to be present, to witness the transfer of this gift of the people to the city of their pride, and, on the part of the Park Commissioners, to whose charge it is to be committed, the acceptance of this sacred trust.

Permit me, in concluding these introductory remarks, to associate with the rich memories of this hour, and of this occasion, the ever memorable words uttered by Mr. Lincoln at the close of his second inaugural—the last, I believe, publicly addressed by him to the American people. They will endure longer than bronze, however imperishable it seems. What better inscription can be put upon this monument?

“With malice towards none, with charity for all, with firmness in the right, as God gives us to see the right, let us strive on to finish the work we are in, to bind up the nation’s wounds, to care for him who shall have borne the battle, and for his widow and orphans, to do all which may achieve and cherish a just and lasting peace among ourselves and with all nations.”

MR. WALLACE'S PRESENTATION ADDRESS.

MR. CHAIRMAN, LADIES AND GENTLEMEN:—I have the honor on this occasion to represent a two-fold constituency.

First. About thirteen thousand citizens of Brooklyn, without distinction of creed or political faith, men, women and children, who for the love they bore a great and good man made up a contribution to honor his memory. From the laborer on the highway, from the workshop, from the counting-room and store, from the stately mansion of the wealthy, and from the scanty apartment of the industrious poor, wherever reverence or love for Abraham Lincoln thrilled the heart, or wherever was destitution or horror at the dreadful deed which so suddenly terminated his useful life, thence came the little drops into the treasury, a name with every dollar, and a dollar for every name. Noble men! noble women! Names fragrant to the memory, worthy to be preserved—and they have been preserved in the archives of the Historical Society, that all who come after may know to whom belong the honor of building up this monument to Abraham Lincoln.

My second constituency is a body of prominent patriotic citizens, who banded together during the war, and contributed freely of their time, of their influence, and of their means in support of the Government, whose praise is in every mouth, and who are known as the War Fund Committee of the City of Brooklyn.

Under the auspices of the Committee, books were opened for subscription immediately after the assassination. Not more than one dollar was received from any person, that we might have pre-eminently a People's Monument; and the Committee bear testimony to the alacrity with which our citizens responded to the call.

The Committee also bear testimony to the faithful management of their treasurer, who not only kept safe his whole trust, but so invested it as to make the \$13,000 contributed earn \$1,000 more, which sums together make the amount expended for this statue.

The Committee also bear testimony to the liberality of our local press, which, without reward, except the consciousness of doing a good deed, used its mighty influence to fan the flame of patriotism, and encourage contributions to this noble object.

And especially the Committee bear testimony to the skill and ability of the sculptor, H. K. Brown, whose works of art adorn Greenwood and Union Square and the national Capitol at Washington, and many other places of lesser note, and who with long and patient labor has produced this bronze statue, which portrays the likeness and characteristics of our late and lamented President to such a degree as to excite the admiration and high satisfaction of our best critics.

And now it becomes my duty—as it is my pleasure—in the name of the War Fund Committee, formally to request the Brooklyn Park Commissioners, of whom (to Mr. Stranahan), you, sir, are the honored President, to accept in perpetuity the custody of this statue of Abraham Lincoln, to love and to cherish and protect during all the days of your authority.

May it ever stand here, looking out over our fair city, where it will hold in review the millions who will visit this beautiful Park, and where our citizens, and the people of every name, as they come up those broad avenues, and look toward the rising sun, will ever be reminded of the pure, the noble, the patriotic Abraham Lincoln.

May his life and character be a model to ourselves and to our children, and to all who would aspire to influence and position in our land. May the union of all the States, and universal liberty—which he loved, and which was his highest earthly aim to preserve—ever be dear to the hearts of his countrymen, and may all the people of the East and the West, of the North and the South, feel themselves to be one people, with one common interest, only emulating each other by their love for the old flag, and for the whole country, and for the whole country's good.

MR. STRANAHAN'S ACCEPTANCE ON BEHALF OF THE PARK COMMISSION.

GENTLEMEN OF THE WAR FUND COMMITTEE:—The Park Commissioners have selected in this, the main entrance to Prospect Park, three positions, as, in their judgment, affording appropriate localities for the erection of as many statues, as memorials of three of the eminent men whose lives are intimately identified with three great struggles in our country's history. In one of these positions they hope to see a statue of George Washington, who on this ground fought his first battle in the war of the Revolution, and whose services as Commander-in-chief of the Revolutionary army, and subsequently as President of these

United States, have not only entitled him to the nation's gratitude, but also secured for his name the enduring respect and veneration of mankind. In the second position they hope to see the statue of Andrew Jackson, distinguished among the illustrious heroes that appeared in the War of 1812, not less distinguished as the Chief Magistrate of this Nation, and in both relations evincing a devotion to the unity, integrity and prosperity of his country, alike unquestioned and unquestionable. It remains for the generous promptings of public feeling to give reality to these ideas and hopes of the Park Commissioners.

In respect to the third position, the events of this day and the ceremonies of this occasion, tell their own story. Soon after the assassination of Abraham Lincoln, the popular heart glowed with an irrepressible desire to do honor to the memory of the lamented dead. Called to the Presidency amid circumstances of the greatest difficulty; confronted in the very outset of his career with the embarrassments, complications, and perils of an incipient civil war; contending, during the whole of his term of service, with one of the most formidable rebellions known in the history of nations; in these exigencies of peculiar trial conducting the Government with a discretion, perseverance, firmness, and patriotic devotion that proved him to be the man of the hour; re-elected for a second term by a grateful and appreciating people; living till the victories of the army and navy had brought the country to the verge of peace, and then falling too soon for the nation's good, Abraham Lincoln has wrought for himself a name, and gained a place in the affections of the American people more lasting than any memorial which it is in the power of art to devise.

As one significant evidence of this fact, I point to that noble statue which has just been unveiled to the public, which you have now presented to the Park Commissioners as Brooklyn's tribute of gratitude to the honored dead, and which in their name I now have the pleasure to accept, pledging to you, and also to the citizens of Brooklyn, that they will endeavor to be faithful custodians of the sacred trust. Here let this monument stand, with the other two to which reference has been made, and which it is hoped will soon be erected, suggesting to the thousands who may hereafter seek the recreations of this Park, that nobleness of character, trueness of heart, and eminent service for the public good, are alike the best qualities of the citizen, and the surest guarantees for the permanent respect of the nation.

THE PARK BOUNDARIES.

SPEECH OF THE HONORABLE J. S. T. STRANAHAN, PRESIDENT OF THE BROOKLYN PARK COMMISSIONERS, AT A PUBLIC MEETING, CALLED FOR THE DISCUSSION OF THE QUESTION OF THE BOUNDARIES OF THE PARK, AT THE COURT HOUSE, ON THE 30TH MARCH, 1869.

I do not know what may be the pleasure of the meeting, but I have conversed with a few gentlemen since I came into the room, and it seems that I am expected to make a statement on behalf of the Board, and perhaps in some degree on behalf of myself. I should make that statement at the very commencement—at the opening of the meeting. If there be no objection I will proceed to do so.

We have met to consider a proposition for an act of the Legislature to change the boundaries of our Park. That we may take it up intelligently, I propose first to briefly state some of the more important facts in the history of the proceedings which have brought the proposition in question before us.

In the year 1859 a demand was felt for legislation to secure public grounds in this city about equally for two objects; first for parks, secondly for the purpose of parades.

Influenced by this demand the Legislature appointed a Commission, composed of highly respectable citizens, partly chosen to represent the park, and partly the military demand, who were charged with the duty of selecting suitable sites for each purpose.

This Commission reported the following year, recommending ground to be taken for parks at five different localities. Of the proposed parks two only need to be particularly referred to now. The more important one was proposed to be located in close connection with the two great cemeteries and the reservoir at Ridgewood. The ground recommended to be taken for it amounted to thirteen hundred acres. Another, about one-fifth as large, (two hundred and sixty-seven acres), was proposed to be located so as to include the reservoir at Prospect Hill.

It will, perhaps, at this time not be at once apparent why those interested in the question should have been led at first to propose that the more important park for our city should be established at Ridgewood rather than at Prospect Hill. An explanation may be found in the fact

that the military of the city had been accustomed to go to ground in that vicinity for drills and parades, and the attention of the military gentlemen in the Commission had thus been for some time directed toward it, and partly in the fact that it then appeared, comparatively, to better advantage as respects accessibility, than at present. Neither the railroad to Flatbush, nor any of the other railroads by which our Park is now to be reached, had then been constructed, while there were three railroads already to Ridgewood, and the same Commission recommended that Atlantic Avenue, which led toward it from the central parts of the city, should be at once widened and improved.

A desire to interpose an obstacle to the extension of the cemeteries toward the Reservoir, also doubtless had some influence upon the judgment of the Commission.

When, however, the proposition came to be discussed at Albany, it was found that some of the representatives of the Western District were strongly indisposed to commit the city to so large an undertaking; they urged that a park, however large and however fine it might be, situated at a point so far in the extreme east, could not fairly be regarded as the central Park of the city: that a considerable part of it was in fact out of the city, and not only out of the city but out of the county, and that the regulation of streets and other matters on one side of it could not be within the control of the county authorities.

The close association of the cemeteries with a pleasure ground was felt to be objectionable, and finally it was said: "You propose to give the Eastern District a park five times as large as that you propose to give us, but you expect us to pay three-fourths of the cost of both undertakings."

The last objection was unanswerable, and after much discussion it was agreed upon, as a compromise arrangement, that the great Ridgewood Park should be made a local enterprise exclusively of the Eastern District, and that the proposed park at Prospect Hill should be considered as an affair exclusively of the Western District.

From this followed the arrangement under which the Eastern District is now exempt from taxation for the present Prospect Park.

The members of the Legislature from the Eastern District, after consulting their constituents, concluded to defer the passage of the bill which had been drawn up with a view to form the great park at

Ridgewood, with the view of taking it up again the following years, but the war came, and it proved to be an indefinite postponement of that part of the original scheme.

I have thus shown how the project of a park at Prospect Hill was gradually developed as an independent local undertaking.

An act providing for the appointment of a Board of Estimate and Assessment, and also for appointing a Commission to lay out and manage the proposed park at Prospect Hill was passed in 1860. The Commission were unable to immediately take any active steps looking to the construction of the park, but deeming it important for the interests of the city that when they should make the first of the reports which they were required to present to the Common Council at the end of each year, they should be able to present the scheme in a form which would make it appear to the public as mature as possible, they decided that a survey and report suitable for publication should be at once undertaken. They appropriated fifteen hundred dollars for all the expenses of this survey and the report of the engineer, and obtained what was wanted for the immediate purpose in view, but it is hardly necessary to say that what was done at this time was of a purely preliminary character, and not at all what would have been required with reference to purposes of construction; certainly not with reference to the construction of the park which we now, five years afterward, have in hand, the boundaries of which are so different that nearly one half of it is quite outside of the ground covered by the engineer's report which we then obtained.

The fact should here be mentioned, that the boundaries of the park established at Prospect Hill, by the Acts of the Legislature of 1860 and 1861 differed considerably from those recommended by the Commission appointed in 1859 to select the ground. The boundaries of the park recommended by the Commission did not extend so far toward Flatbush, and extended considerably farther to the westward, so as to take in half the blocks between Eighth avenue and Ninth, from Douglass to Third street. It was in part owing to my advice that the change was made, and I can perhaps answer as well as any one for the motives of it. The reason that I advocated the change, was that it appeared to me evident that the city might obtain, at the same cost, a much larger area of land suitable for a park. We did obtain by the exchange, and without any additional cost to the city, more than twice as much land on the Flatbush side as the Commission had proposed should be taken

in on the South Brooklyn side, and that which we gained included the ground occupied by the series of roads and walks running through what we call the East Woods, and which during the last year was so much enjoyed by the public.

After the passage of the Act to establish the park in 1860 an effort was made to still farther revise its boundaries, and the engineer whom we employed to make the preliminary survey in his report seconded the proposal, suggesting that the ground between Warren and Baltic streets should be thrown out, and that the east boundary of the park should be shifted from Washington avenue to a new avenue proposed to be laid out between Classon and Franklin avenues.

This would undoubtedly have enabled a great improvement to be made in the plan of the park as then contemplated east of Flatbush avenue, giving it the greater breadth which it so much needed, but the objection which was effectively urged against it was the serious inconvenience which would result from the closing of Washington avenue.

I have thus viewed the principal facts in the preliminary history of our enterprise. At this time nothing had been absolutely decided, for the act of the Legislature, providing for a park at Prospect Hill, which was passed, as I have said, in 1860, proved to be defective. The work of legislation was accordingly done over again in 1861, when the Park Commission was definitely established, and the acquisition by the city of the land I have referred to was first legally provided for. It was not, however, until midsummer of 1864 that the Board of Estimate and Assessment completed their business, and we obtained possession of the land. We were then in the midst of the war, and even if we had obtained our land sooner it is doubtful if we should have set to work upon it.

During these three years we had not, however, been merely lying still. The friends of the thirteen-hundred-acre-park scheme at Ridgewood had gradually abandoned their intention. Other parts of the original scheme had been dropped or modified. The military were beginning to look at the vicinity of Prospect Hill for their parade ground. The general subject of providing our city with parks had been much thought about, deliberated upon and debated by our Commission. We had obtained information about parks in other cities, abroad and at home; the influence they had exerted upon the cities which possessed them, and what it was in them that their influence depended upon. We had watched the Central Park rapidly advancing toward completion,

and had gained experience of its great popularity, and of the influence it was destined to exert. Indeed, we in Brooklyn were already feeling the consequence of its construction in a manner not at all satisfactory to us. Not only had we been brought to understand the whole subject of our duties better, but during those years—those long, those everlasting years—from 1861 to 1864, there had been great changes. Our city had been changing, and in all its change we saw a tendency becoming manifest which gave some of us much anxiety.

I speak of a tendency which we then saw toward results which we could not help anticipating with disquietude. Let us look at the facts, however, as they are patent to us to-day, and you will better understand what it was that we then saw or thought we saw. During the last two years nearly one-half more houses have been built in Brooklyn than in New York. New York in 1867 built two thousand eight hundred and eighty houses. Brooklyn three thousand six hundred and fifty-nine. New York in 1868 built two thousand one hundred and twelve houses; Brooklyn three thousand three hundred and seven. It is certain that our population is increasing more rapidly than that of New York, and unless New York shall absorb the eastern towns of Westchester County, our city must be expected to gain yearly until it shall become the larger of the two. The question with which we are most concerned is, then, not so much the amount of population which we are to have in the future, as its character and its capacity. By character I mean especially its ability to meet its monied obligations, and thus bring down the per centage of its taxation.

It is never desirable that classes should be separated in the way they were tending to separate here five years ago; it is never desirable that the rich should so draw themselves apart in distinct communities or quarters as to throw upon the poor an overwhelming share of the burdens of carrying on the necessary expenses of their local government. You are aware of the terrible suffering which has occurred this year in the Eastern suburbs of London from this cause; and also in some of the suburbs of Paris, where a complaint was lately made, that in a district containing 25,000 inhabitants there was not a single resident rich enough to be called on for charitable aid to those in complete destitution.

By the construction of the Central Park, New York placed us for a time at special disadvantage in the competition for securing taxable capital. She had done so before when she had brought in the Croton,

and to restore our advantage we had then been compelled, after waiting as long as we could, to undertake our Water Works. If we had not constructed them when we did what would Brooklyn be now? Simply a poor suburb of New York. In the same way we were stimulated, after New York had made it necessary, to build the Academy of Music. In one thing only have we yet shown ourselves able to exercise the forecast needful to the proper development of the advantages of our city without waiting for a ruinous disadvantage in competition to be established. In one thing we are about to strike out first and foremost, and long before the much talked of railroad from the Battery to the upper part of New York and to Westchester is made, I trust we shall have had the advantage of our bridge.

But to go back to the Park Commission in 1864. At no time in the history of the two cities has the tendency appeared to be so strongly established toward a state of things in which the capitalists of the country living at its Metropolis should have their residences in the City of New York, while their clerks and workmen only had houses in Brooklyn, with the inevitable consequence that the profit of the labor represented by our population should be mainly enjoyed outside our limits, and that our taxable property should be of hopelessly inferior character.

The question which was pressed upon us was, therefore, simply this: whether any plan of improvement could be devised and undertaken which would be adequate to attract and hold among us a large share of that class of citizens which it was necessary should be attracted, if we were to avoid throwing upon our people of moderate means, and upon the poor, an excessive and crushing burden of taxation. If not it was certainly very questionable whether we could afford to enter upon any plan the carrying out of which would involve the City in a considerable expenditure. In short if we could not settle this point satisfactorily, it was doubtful, to say the least, whether the City could afford a park at all.

Considerations of this character weighed upon us much more in 1864 than in 1860 when the Park at Ridgewood of 1,300 acres was still on our hands. They forced us to proceed deliberately and cautiously.

First of all, we took the precaution of giving a fresh and more complete examination to the question of boundaries, approaches and entrances; a question properly antecedent to the question of a plan of

interior improvement, and for this purpose we called Mr. Vaux, one of the designers of Central Park, to our assistance. We knew that the want of consideration of this question at the outset had already been a source of difficulty and of great expense to the Commissioners of the Central Park, and that they were even then debating propositions for acquiring land to improve their entrances, which had enormously increased in value since their work commenced. Our review of the question led us to fix upon one point as especially suitable for a principal entrance to the Park, and induced us to apply to the Legislature at once for the provision of so much additional land as was necessary to form what is now known as the Plaza. Had the Central Park Commission exercised the same forecast, in regard to the comparatively contracted vestibules which they are now about to lay out at their principal entrances, it would have saved at least a million dollars of their expenditure.

Turning then to the general question of boundaries, we had convinced ourselves that the ground we had, was not all that was wanted in respect to extent or opportunity for improvement, with reference to the problem before us. But, although we obtained a report which very clearly demonstrated in what direction we should look for an enlargement of our borders, we determined before recommending the acquisition of any new territory, that we would have a complete and well-matured proposition to lay before the community.

We therefore next employed Messrs. Olmsted & Vaux, to design a general plan, taking another year for its preparation, and for our deliberation upon it. When at length we were satisfied that we had matured a plan, adequate to the purpose we had in view, we printed our design, with a report very fully setting forth its character, and circulated it diligently among our fellow citizens, inviting, through the newspapers and otherwise, their judgment upon it.

Being satisfied with the general expression of public opinion thus obtained, we then went to the Legislature and asked for the additional territory required to carry out the plan. We at the same time asked for power to sell the land not covered by our plan on the East side of Flatbush Avenue, so that we might have money to pay for the additional land which we needed to carry out our design. The power to buy the largest part of what we wanted was given us, but although our request for permission to sell was backed by three thousand petitioners, and the bill for the purpose passed the Senate, it failed to receive the assent of the Assembly, and its discussion was postponed.

Still the larger part of the necessary land was provided for, and we were now prepared to commence active operations with an increasing confidence that our scheme was a sound one, and that as it became better understood, it would prove more and more acceptable, and eventually would be fully carried out. We at once, then, set about the improvement of a part of our ground, with a clear foreknowledge that the result would be taken by the public as a sample of what Brooklyn was going to have in the way of a park.

We began upon that part of our ground most difficult and most expensive to improve—that part where, in order to accommodate our grades to those already established in the streets, it was necessary to make the greatest changes. The Flatbush avenue grade had just been sunk 12 feet below its previous level. The ground we had to operate upon was in part a quagmire, and elsewhere consisted largely of a tough indurated clay, packed with stone, and requiring to be moved by the crow and pick. The whole district of our earlier operations was indeed a desert of the most disagreeable character, rugged, treeless, mutilated, and lying bare to the avenues, presenting a general resemblance to the unimproved ground south of the Reservoir. We took hold of it first, because it was the most difficult, and because we knew that in removing difficulties we should be removing doubts. Now, this ground appears to the visitor who drives over it for the first time, as if it were exactly in the shape that is most desirable; it connects perfectly with the avenue, the boundaries are hidden directly the park is entered, good sized trees are growing over hill and dale, the meadow spaces are broad and ample, and it really seems as if nature had kindly adapted this particular spot for its special purpose.

. It has undoubtedly been transformed from what it was to what it is at great cost, as an approach to ground of a totally different and much more attractive and easily treated character. It does not, however, follow that we can recommend the city to undertake a similar labor on the other side of the avenue, merely to improve disconnected patches of land that have no relation to the main scheme, which was based on the idea of balancing the difficulties of ground on the part of the park nearest the city, by the introduction of a large stretch of cheaper and more easily improved flat land at the other extremity.

We may here observe in regard to the changes of boundary which have been made since the action of the Commission appointed to select a site in 1859, that so much of the park as has been taken from the Town of Flatbush, being an area of 228 acres or nearly one-half of all,

cost Five Hundred and Forty-three Thousand. The upper portion, taken from within the boundaries of Brooklyn, containing 350 acres, cost two million seven hundred and ten thousand dollars. That is to say for each dollar spent the city has obtained between three and four times as much land where it has taken it on the Flatbush side, as it has, where it has taken it on the Brooklyn side; and the cheap land, on an average, is much better for park purposes, and involves very much less expense for improvement than that which has cost so much more. The great body of visitors will always enter at the Plaza. Once within the park it matters little where they travel. It was, and is, therefore, true economy to elongate and narrow the park toward the city, and to spread it out on the cheap land on the Flatbush side as we have done.

But to return to the main question—keep your mind fixed upon the end we had in view. With certain obvious natural advantages over New York, but as yet with confessedly less wealth and population, we wanted to guard against the danger, that Brooklyn would take the character of a second-rate suburb of New York; we wanted to aid in establishing for Brooklyn in the minds first of all of our own citizens, and afterwards throughout the country, the character of a first-rate quarter of the great metropolis.

And who will say that we have not thus far done our part towards this end?

Although our park is incomplete, only about 200 acres being as yet fairly improved, it is unquestionably the fact that it is talked of to-day all over the United States, by those whose opinion is of most value, as equal, and in many respects superior to Central Park—and what has been the consequence? It has been said by those who should know, that the day we opened the park saw a rise in value of the real estate of our city of ten millions of dollars.

We submit then that so far we have served our city well. But we think that we can do more. We are convinced that the city, by a lucky chance, has the opportunity of gaining a still better reputation. We not only think that the impression can be established that Brooklyn offers places of residence as good in respect to park privileges as any in New York, but we also believe that an understanding can be established that the very finest sites for city residences, in connection with a noble park, need not be looked for in New York, they must be sought in Brooklyn.

It happens thus: New York was laid out years ago, when the price which great numbers of people are now willing to pay for luxurious residences, was not dreamed of, when five or six hundred dollars per year was considered, even by a wealthy merchant, to be a great rent to pay. Now, on the other hand, there are numbers of people to whom five or six hundred dollars a year, more or less, is felt to be of little consequence in the rent of a house, provided it be so much finer and more luxurious.

In laying out the city this condition of things was not thought of: consequently, the people of New York, through the Central Park Commission, are now seeking to improve their plan in that part of the Island as yet far out of town, where streets have not been made, and where there is little building. About their park they cannot do this, though efforts are making in a small way. There is the East Side Association and the West Side Association, and numberless little rings of interested speculators who vainly try by forethought to control the character of some section or block in which they own lots, but no one of these appears to control property enough to do what is necessary to establish beyond contingency the success of a single comprehensive scheme. The recent rapid advance in value, of the property held compactly and managed shrewdly by the corporation of Columbia College, is an example of the advantage which may result from the power to control the character of improvements throughout a complete district, even when the street plan is out of the reach of improvement. In this case it has been made certain, that a considerable property will be occupied for a long series of years, exclusively, by a certain agreed on class of residences, but it is almost an isolated instance. It is too late to do anything of this kind in connection with the Central Park.

It is not too late for us. We still hold the opportunity of establishing a district which shall have throughout a character in the highest degree attractive. The possession by the City of Brooklyn at this juncture, of the 128 acres of fairly paid for land, on the east side of the park, thus puts in its hands the one additional lever that is needed to establish the balance of advantage between the two cities.

What we want to do with this land then, is this. We want to thoroughly revise the whole street plan from beginning to end, and to lay it out anew in such a way as will not only be much more convenient and useful to the whole public, than it would under any other plan that has been proposed, but in such a way as will make it easy for us to show, every one who comes to the park, that we have in Brooklyn, sites in close connection with our park, better adapted for first class residen-

ces than can be found any where else. Then we propose to sell these lots, with certain provisoes in regard to the character of the improvements which shall be made upon them. We believe that if we are allowed to develop this idea unhampered, it will tend to the advancement of the reputation of Brooklyn as a place of residence, well nigh as much as the park itself, and will give it exactly the advantage that it needs in its struggle for its natural rights in this respect in competition with New York. We propose to reserve besides the avenues and about twenty-eight acres of ground for public use, the lands which include the Reservoir and the higher grounds adjacent. But after making these reservations for a public garden on the hill, and sites for public buildings and places, and after laying out the ample avenues which we propose to make, with their bordering plantations, there will still remain a body of over one hundred acres of land to be disposed of, with such restrictions as will insure the erection upon it, of strictly first-class dwelling houses.

If we assume that these lots will command the price of twenty-five hundred dollars a piece, which is below the estimate generally put upon them, the sum which would be realized by the city from their sale, would be three millions of dollars.

But we shall also save the expense of forming and maintaining the ground as a park; this we judge from our experience in dealing with the ground of a similar character on the other side of the avenue, would be about a million of dollars. Of course we include in this estimate the fencing and all the usual and necessary furniture and equipment of a convenient and agreeable place of crowded public resort. Add this million to the sum which we expect to receive from the sale of the ground we do not want, and it makes a difference to the city in favor of our plan of four millions of dollars. We reckon that this sum will pay the city subscription of three millions to the Bridge and the improvements at the Wallabout, which may cost one million. This, however, is not all. If we double the price of the land, for the value of buildings which would probably be erected on it, we should add, independently of the immense stimulus thereby given to the surrounding property, at least eight millions of dollars to the taxable property of our city, and enlarge its revenues by nearly half a million of dollars annually.

We have very carefully considered the matter, and we express in these estimates our deliberate and well established convictions.

The ability of the city to make a good title to this land is sometimes questioned by persons who are not familiar with the history of Park legislation.

In 1864 when land was first taken for the park, and it became necessary to raise one million three hundred thousand dollars to pay the awards, city bonds were issued and put upon the market for sale. The main security for these bonds consisted in a statutory lien upon the park land. Our capitalists however objected to this security, that the city had not the fee but merely an easement in the land, similar to that by which a street is held, and that if the holder of the security should be obliged to realize he could have no permanent possession of the land, since it must necessarily revert to the owner of the fee as soon as it ceased to be used for park purposes, and that, in this respect the security was inferior to that of our water-bonds, wherein all the works, including reservoirs, pipes and hydrants, were pledged for payment. In order, therefore, to furnish a new credit for park bonds, which should make them equal to water bonds, an Act of the Legislature was passed in the Spring of 1865 authorizing proceedings to be taken for the purpose of transferring the ultimate fee to the city. Such proceedings were accordingly had, the residuary interests of the owners valued by Commissioners appointed by the Supreme Court, and payment made to the parties. The result showed that capitalists fully appreciated the additional security thus established for park bonds, since they immediately rose in the market, and feel to this day the effect of this salutary provision. The fee of the land having been acquired, the Commissioners feel assured (and they are sustained by the best legal authority), that if the Legislature concurs in a sale there can be no difficulty about the title.

I have tried to give you a plain statement of the facts which have a material bearing on the point at issue. The questions involved are of vital interest to the tax-payers of this city. Holding the responsible position we do, as Commissioners of the Park, and having to carry forward this important public work in the face of serious disadvantages, we feel it absolutely necessary that we should have in the future, as we have had in the past, the intelligent, willing support of our fellow citizens.

The scheme, as you will see, has a definite beginning, and middle, and end to it. The first stage has been passed through, and the result shows that our calculations were sound, for no one can deny that the

enhanced value of Brooklyn property to-day fully justifies the liberally conceived plan of operations we recommended when our whole intention was laid bare before you three years ago.

We are now in the middle of the work, all the important points, save one, have been carried. We have all the ground we want and where we want it; our most burdensome operations in the field have been successfully carried through, and we are henceforward in a position to go ahead under more favorable circumstances. What the end is to be we cannot tell, for the point left unsettled seems to us to be of vital importance to the financial success of the whole undertaking. It is the one now before you for consideration.

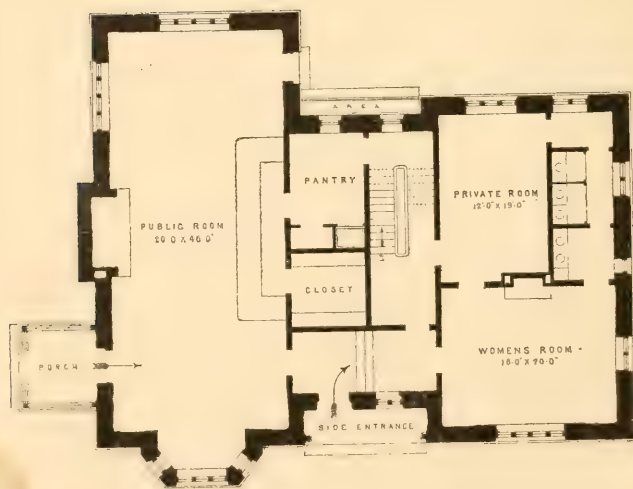
What we ask, with a profound conviction of its necessity, is what we have asked for from the first, that the Legislature shall give us the power to make a fresh disposition of the land on the east side of the avenue, so that it may be laid out under our direction in a way that we firmly believe will not only help the park, by giving it proper approaches in every direction, but will enable our whole scheme to become a really comprehensive project for the advancement of the prosperity of Brooklyn, and at the same time establish it on a thoroughly satisfactory basis as an investment of city funds.

We are, however, now as heretofore open to any new conviction that will enable us the better to perform our trust, and only ask that the question shall be discussed in a candid spirit, and on broad public grounds.



PRINCIPAL VIEW OF DAIRY

OLMSTED, VAUX & CO., LANDSCAPE ARCHITECTS



PLAN OF PRINCIPAL FLOOR

REPORT

OF THE

LANDSCAPE ARCHITECTS AND SUPERINTENDENTS.

To the Brooklyn Park Commissioners :

GENTLEMEN :—

We lay before you our usual Report for the year upon matters of Design, Construction and Superintendence.

In the work laid out during the year, no essential deviation from the original design has been made, though certain details of importance have been introduced which will be referred to below. The conditions which had previously prevented work upon the West side of the ground having been removed, the Northern part of the Park has been finished with the exception of a little planting, and this portion of the design will next spring, for the first time, be comprehensively exhibited upon the ground. The main drive on the West side is complete from the entrance to the Lookout Hill, where it meets the Nethermead extension of the East drive, and the public has in use five miles of thoroughly constructed carriage way. A corresponding extent of the surface has been worked over and a large part of it now realizes the design, so far as it can be made to do so by the completion of the mere constructive work.

There are in use, also, five miles of gravelled or concrete walk, and two hundred acres of woodland shrubbery and open meadow surface. The construction of the Park as designed is complete from end to end, East of a line drawn through the middle of it, except at two points, where there are deposits of clay and soil to be used elsewhere. Work is more or less advanced on nine-tenths of the remaining ground, and the larger part of it will be in suitable condition for public use next summer.

The most eventful occurrence of the year has been the completion of the great well and the Water works at its mouth. A very important part of our design depended for complete success upon the practicability of obtaining a certain amount of water by this expedient, and we should

hardly have ventured to include so large an extent of lake surface in our design without the encouragement of your President, who had given special personal study to this source of supply, and who had from the outset perfect confidence in its availability. It is therefore a matter of congratulation that the plans prepared by Mr. Martin, as Engineer-in-Charge, and approved after thorough consideration by your Board, have this year been successfully carried out, the present indications being that a considerably larger supply of water will be obtained than it was thought necessary to provide. The general result is that a provision of excellent cold spring water, sufficient not only to keep the extensive ornamental waters in a condition favorable to health, but to furnish a large number of drinking fountains, has been secured in a manner which makes the Park to a great degree independent of all other sources of supply. A public walk is required to pass the point where, for engineering reasons, the Well occurs, and as many visitors will be desirous of examining it, we have preferred to treat its mouth in such a way that, while perfectly protected, no one can pass without obtaining a somewhat forcible impression of the extent and character of the work. For this purpose the walk, as it approaches the Well from either side, is enlarged so as to include a circular deck, in the middle of which is a railed opening twenty feet in diameter overhanging the outer part of the cavity.

The Boiler House attached to the Well is in a conspicuous position on the lake shore, and we have designed its exterior with special reference to this prominence of situation. In its interior plan a stairway for communication with the pump platform at the bottom of the Well has been provided, so that under proper regulations visitors may have the opportunity of examining the works with ease and safety.

Mr. Martin we are informed, is about to give up the appointment of Engineer-in-charge which he has for some time held under your Commission, having been invited to fill a position in the City of Brooklyn of larger professional responsibility, and we desire to put on record our sense of the value of his services to the Park, not only in the solution of such special problems of construction as the one referred to above, but also in the daily supervision of the various operations that have been necessary to the practical development of the Park design during the last two years.

There has been a more extensive transplanting of trees of a size making the use of special transporting apparatus desirable, upon your

ground, than to our knowledge has been attempted elsewhere on the continent. Two trucks of original design prepared by Mr. Culyer have been used, both operating in a more rapid and economical way than those so extensively employed in Paris. With one of these, trees weighing with the balls of earth attached fourteen tons, and measuring between four and five feet in circumference have been moved. The whole number of trees weighing upwards of one ton and measuring more than one foot in circumference, which have been thus far moved, is six hundred. It is too soon to express entire confidence of permanent success, but from the experience of a single summer of rather trying character, the result promises to be satisfactory and highly creditable to Mr. Bullard, the Park Inspector, who continues the immediate management of the planting.

The Meadow port and Nethermead arches have been completed, and the Lullwood Bridge, constructed of oak on stone abutments, has been carried across an arm of the lake. These works have been under the immediate charge of Mr. E. C. Miller, Assistant Architect.

A building has been constructed on the Parade Ground which has been designed to provide rooms for the use of the military, with apartments for a janitor, and to furnish in addition a partially enclosed shelter for the accommodation of the general public. This structure has been placed at the top of a gentle slope which has been artificially constructed at the western extremity of the Parade Ground for the purposes set forth in the explanation of the design which was included in our special report on the subject submitted for the consideration of the Board prior to the commencement of operations.

The Dairy is now complete so far as the main structure is concerned, and is ready for occupation. The need which this building is designed to serve can be met under very advantageous circumstances in the Brooklyn Park, and is of a different character altogether to that which will be responded to in the Refectory, which is the next building of importance that should be proceeded with. The latter building is intended to occupy a conspicuously prominent position in the immediate vicinity of the *Breeze Hill Carriage-Concourse*, the *Lookout Hill*, the *Lake Shore*, and the *Nethermead*, which is a stretch of greensward in the heart of the Park. The Refectory is proposed to be a house of entertainment on a liberal scale, agreeably situated so far as outlook is concerned, but with no more suggestion of privacy or retirement than would be found in a suburban hotel. The Dairy, on the other hand, is intended to meet the same physical need for refreshment, but it is designed to be used

by visitors only when in search of a more thoroughly rural experience than can be looked for at any point which furnishes accommodation for an assemblage of carriages. It is of course impracticable anywhere within the necessary limits of a city park, to make sure that visitors shall enjoy a sense of complete rural seclusion, but the inclination which influences those who are able to go far into the country for recreation, is often strong with thousands, who are in no position to leave their business and their families. While, therefore, results which would seem forced or improbable are to be avoided, it is desirable to meet this requirement on a scale that shall be adequate for the purpose. We therefore abandon all idea of contrasting the publicity of the city with the privacy of deep woods, mountains, lakes, and rocky fastnesses, and accept another ideal altogether, that of pastoral rural life, as the most valuable and universally available one, for the purpose we have in view.

The development of the pastoral idea in its most favorable aspects is possible in a large City Park, and it is the peculiar natural advantage of the ground under your control, that it offers an unusually favorable opportunity for the purpose. A stretch of greensward a mile in length, surrounded by woods, and unbroken by any carriage road, should certainly offer a field of ample dimensions for an illustration of the idea, and this we have in the Brooklyn Park. Thousands of people, without any sense of crowding, stroll about the level or undulating sunny or shaded turf-spaces that are to be found in this strip of pasture and woodland; and with a careful arrangement of the planting yet to be done, the number of visitors may be much increased without any interference with the general suggestion.

If, as is now frequently stated in the public prints, the Brooklyn Park is in some respects more attractive than the Central Park in New York, it is because we have from the outset been sustained by your Board in our effort to improve a considerable portion of the ground, with special reference to the development of this element of pastoral effect, in the pursuit of which we have at a few points made considerable changes in the surface of the ground, so as to connect a series of dissevered and isolated patches of comparatively level ground, into one sweep of grass-land that is extensive enough, to make a really permanent impression on the mind. Before this important feature in the general design can be adequately realized by the visitor, it will of course be necessary that sheep and cattle should be allowed to graze in the meadows; beautiful specimens of fine breeds should be selected, and ample provision for their accommodation should be made in suit-

able stables, connected with an establishment of which the Dairy building would properly form the most important feature.

Full details of the progress of the work during the year, and interesting statistics of the public use of the park, will be found in the appended reports of the Engineer-in-charge, and his principal assistants, Mr. Bogart and Mr. Culyer.

It will be observed that the public use of the park has been largely greater than it was during the previous year. It may be remarked also, that a gratifying improvement has occurred in the character of this use; a much smaller proportion of the visits recorded having been from curiosity to examine a new thing, and a much larger part having been made with a view to family and social recreation. The number of domestic pic-nic parties was large, and more than two hundred and fifty Sunday schools and other neighborly and friendly organizations, found suitable accommodations for their pleasure excursions in the woods near and opposite to the Dairy. We are strongly convinced that no other element in the design of your work compares in importance with that which is calculated to suggest, facilitate, and encourage the choice by the people of the City, of simple temperate, healthful, rural and domestic forms of recreation, instead of such as involve a liability to the development of habits of extravagance, and a morbid inclination for the unwholesome excitements of city life.

We desire, in conclusion, to draw attention to the unsettled state of the question in regard to the treatment of the land under the control of the Commission on the East side of Flatbush Avenue. The fact that it continues to be impracticable to make definite calculations as to the disposition of this ground, has a prejudicial effect in reference to the general development of the Park design, and the long continued delay is also attended with many practical disadvantages. The whole subject was fully discussed in our Report made to your Board in 1866, prior to the commencement of active operations, and again in that of last year; and we have simply now to say that the views we have heretofore expressed remain unchanged.

Respectfully,

OLMSTED, VAUX & CO.

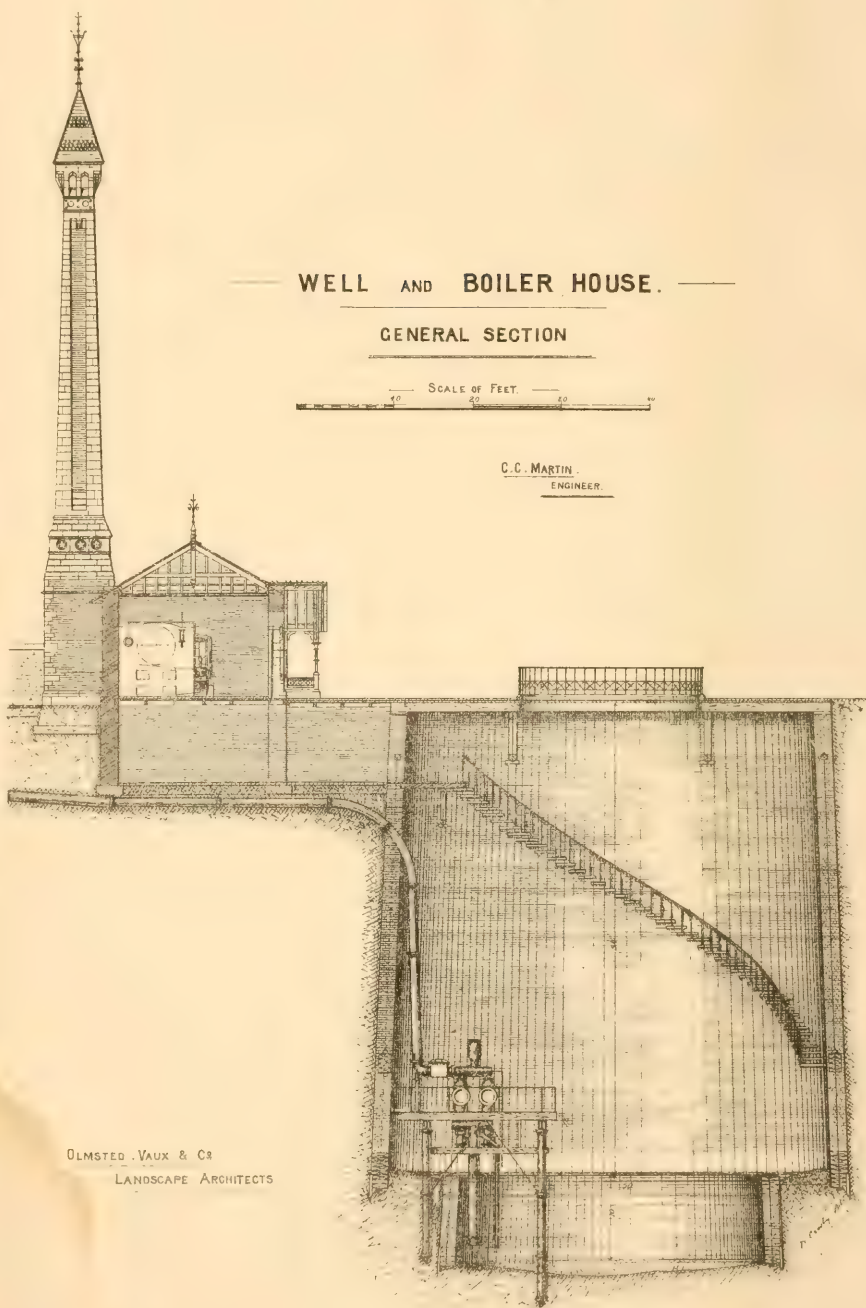
Landscape-Architects and Superintendents.

WELL AND BOILER HOUSE.

GENERAL SECTION



C.C. MARTIN.
ENGINEER



OLMSTED, VAUX & CO
LANDSCAPE ARCHITECTS

REPORT.

OF

C. C. MARTIN, ENGINEER-IN-CHARGE.

PARK COMMISSION, CITY OF BROOKLYN,

ENGINEER'S OFFICE, January 1st, 1870.

MESSRS. OLNSTED, VAUX & CO.,

Landscape-Architects and Superintendents.

GENTLEMEN :—

During the past year the work upon the Park has been confined mostly to the Western and Central portions. The force of laborers employed has not been as large as last year, but the results of the season's work have been quite satisfactory since the labor has been concentrated upon fewer points, and these have been steadily pushed forward to completion. No strikes have occurred among the laborers and but one among the mechanics, and that was due to an arbitrary society rule which was finally disregarded by the Park employées.

ROADS.

The Park drives have been constructed principally with rubble stone foundations. Heretofore the Roa Hook gravel was placed directly upon the broken stone. This season two inches of coarse gravel, with a small admixture of loam, was placed upon the broken stone, and two inches of Roa Hook upon this.

By the substitution of Park gravel the cost of the drives was materially reduced, as the material was less expensive, and it packed more readily under the action of the roller. There is every reason to suppose that these drives will be equally as durable as the more expensive kind, because the wear of the vehicles will still come upon the Roa

Hook gravel, and before this two inches of surface gravel is worn out the drives will require to be surfaced with fresh material. Continued and careful observations have been made on the drives with the rubble foundation, in order to compare them with those having Telford foundation, and they have been found to compare favorably with them. The road gutters have been constructed almost exclusively of stone blocks similar to Belgian blocks, and laid upon a bed of sand one foot deep. They are much less expensive than the brick gutters, will be equally as durable, and will be much more easily repaired. There is but one serious objection to them, and that is that a large amount of surface water is lost by passing between the blocks, and thus into the ground. At this time, this is immaterial, as there is an abundant supply of pure water for the lake with its present area, but when the lake is completed it will be advisable to save all of the surface water possible, in order to keep it supplied; but the probabilities are that the fine silt worked from the roads will, before that time, so effectually close up the crevices between the stones that almost no water will be lost. Should it be found that too much water is lost, a very simple, cheap and effective remedy will be, to cover the surface of the block gutters with a light layer of tar concrete. This will make a gutter that will be impervious to water, and thus equally as effective as brick gutters.

Several additional experiments on tar concrete drives have been made. The specimen of drive laid by the Scrimshaw Patent Concrete Company, in the fall of 1867, has steadily improved since its construction. During the year it has had no repairs, and no expense has been put upon it except to sweep off the dust and mud brought on it by carriages from the adjacent gravel roads. It is at the present time in perfect order. From experiments which I have made, I have been convinced that there is no difficulty to be anticipated in making repairs either from the breaking up or wearing out of the concrete material. If, from the unequal settlement of the ground, or any other causes, the concrete should crack, a section of it can be removed and new material put in its place, without material injury to the Drive surface; and when the surface has worn uneven, as it will in time, by constant use, a new surface can be laid upon the old, and the adhesion is so complete that no tendency to crack is exhibited.

Samples of the Scharf Patent Concrete Pavement have been laid. This promises well, and if it withstands the action of the frosts, it will also make a good road surface.

Later in the season a sample of the Haider Patent Concrete Pavement was laid on the Drive. This also promises well, but time and the elements must decide the merits of this or of the Scharf Pavement. The sample of Fisk concrete laid in 1867 was almost entirely disintegrated last season, and during the past summer the patentees, at their own cost, re-surfaced it, but before the season was over it had again gone to pieces. For walks it answers a better purpose, but even for walks the signs of failure are at this time becoming evident. The disintegration commences at the bottom and gradually comes to the surface.

STEAM ROAD ROLLER.

During the season the Park Commission authorized the purchase of a Steam Road Roller from Messrs. Aveling & Porter, of Liverpool, England. It arrived in the Park in August, and was immediately set up by Park employées, and put to work, and from that time until the work upon the drives was suspended for the season, it worked almost constantly, and, for a great portion of the time, night and day. It effected a very marked saving in the expense of rolling. The roller weighs fifteen tons, and rolls a width of six feet. It moves either backward or forward with equal facility, and hence does not have to be turned around on the drive, although it can be turned around in its own length, which is about twenty feet. The rollers are five feet in diameter. Although this roller may be entirely adapted to the rolling of broken stone or McAdam roads, a few modifications could be made which would improve it for rolling gravel roads. The rollers should be at least six feet in diameter, so that they would not have so great a tendency to roll the gravel up in waves before them. Secondly, the face of the roller should be straight. On this one the rollers are about five-eighths of an inch convex, and there being four of them, the effect is to produce four parallel depressions, five-eighths of an inch deep, and this is only produced by moving the gravel sidewise. This sidewise motion is prejudicial to the packing, and would be obviated by making the faces of the rollers straight, instead of convex. Again, for soft roads, Park roads, with a layer of fresh gravel, three or four inches thick upon them, the traction power of this roller is scarcely sufficient. This could be obviated, either by coupling the four rollers, so that they would all become driving wheels, or else by throwing more weight upon the driving wheels. The roller, as it is, effects a very great saving of expense in rolling, but the above obvious improvements would add considerably to its efficiency. The cost of running it is about ten dollars per day, and it does about twice as much effective rolling as the seven ton Park roller, which required eight horses to run it, and costs twenty dollars per day.

ARCHWAYS, BRIDGES.

The Enterdale Arch, near the main entrance, has been finished during the year. Also, the Meadowport Arch, with the exception of the wooden lining, and the Nethermead Arches, except the pointing up of the brick work.

The Lullwood Bridge has been completed, and is in use. A small rustic bridge over the Ambergill has been constructed. A temporary wooden bridge has been built across the lake near the south end of Breeze Hill to connect the finished drives on the opposite sides of the Lake, until the permanent bridge shall be built. It is one hundred and eighty-four feet long, thirty-five feet wide, and fourteen feet above summer level of water in the Lake.

DAIRY HOUSE.

The Dairy House has been completed, and is now occupied.

THE FOUNTAIN.

The masonry of the Fountain Basin on the Plaza is nearly completed, and on the occasion of the unveiling of the Lincoln Statue, water was, for the first time, thrown from a temporary jet. The gas, water and drainage pipes have all been put in, and are in good working order.

WALKS.

Nearly all of the walks laid on the Park during the year have been made of Tar Concrete—a large proportion under the Scrimshaw Patent, a portion under the Scharf Pavement, and a portion was laid with Improved Fisk Pavement. All of the tar concrete walks are in good condition, although some of the Fisk Concrete walks will, from present indications, require re-surfacing next season.

THE WELL.

The well for supplying the Park with water is essentially completed, although some of the surroundings, as railings, engine-house roof, &c., are yet unfinished.

CONSTRUCTION OF WELL.

The method of sinking the well having been determined upon, the work was commenced as follows: an excavation about sixty feet in diameter was made to a depth of seven feet. Pieces of plank three feet

long, ten inches wide, and two inches thick, were then laid upon this bottom at intervals of about three feet from centre to centre upon a circle of fifty-four feet in diameter, and the whole carefully levelled. A band of wrought iron fifty-four feet in diameter, half an inch thick, and twenty-two inches wide, was then obtained and placed upon this ring of plank. The band was made of sheets about fourteen feet long, the ends of which were placed together, forming butt-joints; over these ran covering plates, three feet long, and double counter sunk rivets were used to secure them. These having been put in place and brought to a true circle, a ring of oak timber, eleven inches thick, eleven inches wide on the top and two inches wide at the bottom, was placed inside of the iron band, the thin edge resting on the short plank, and being in contact with the iron. This was securely fastened to the band by means of bolts and spikes. Upon this was laid another ring of oak timber six inches thick and twenty-four inches wide, the inner diameter of the ring being fifty feet. These two rings were securely fastened together by spikes ten inches long and half an inch square. Seven courses of oak of the same dimensions as the last were then laid up, making a total depth of timber of four feet, the whole securely spiked and bolted. The iron band reached to the top of the second six-inch course of timber, and the third course projected over its edge so as to come flush with the outside of the iron, thus forming a shoulder against which the iron could press, and which would prevent its being forced upon the outside of the curb. Forty holes were then bored through this four feet of timber, to receive the rods of one and one-half inch round iron which were sixteen feet long. These rods were passed through this mass of timber and were held in position at the top by a turnplate. The wall of brick masonry, two feet thick, was then commenced upon this wooden curb, and carried up to a height of ten feet, where four layers of pine timber, each six inches thick and sixteen inches wide, were introduced. These were placed in the centre of the wall, and the iron rods passing through them were securely bolted down with heavy washers and nuts. The wall was now sixteen feet high, besides the cutting edge, which projected ten inches below the main wall, and was securely bolted together. While this was being done a suitable Derrick had been obtained, and so placed that the boom would swing over the wall and command the interior space also. Iron buckets for hoisting out the sand, and a six-horse-power hoisting engine were procured. Work was then commenced upon the excavation. The material from within the wall was excavated and thrown into the iron buckets, and was then hoisted out and taken away. The excavation in the centre was

kept below that at the sides, and when sufficiently advanced the material from immediately under the wall was removed. This was done with considerable care and uniformity, and as the excavation progressed the wall slowly and quietly settled down. This process was continually repeated until the wall was lowered forty-one feet, when frost suspended operations last season. At the same time that the excavation was going on within the well the masons were at work carrying up the wall. The iron rods were extended within this wall to its top, but their size was reduced to one and one-fourth inches diameter. The brick wall had a battu towards the centre of half an inch per foot. The object of this was to prevent the wall from binding or getting wedged by the pressure of the earth. The result was as anticipated. The wall regularly and uniformly settled as the excavation was made.

The work was resumed last spring, and progressed satisfactorily until the bottom of the curb was about three feet below the water-surface, when it was found to be impossible to make the excavation under the curb uniformly. The curb did not settle evenly, and cracks were produced in the wall, also an unequal pressure from the material on the outside was thrown on the wall, which produced an eccentricity of about two feet in the diameter of the well. This wall was allowed to remain in the position last indicated. Another curb similarly constituted of timber, brick and iron was constructed, the interior diameter being thirty-five feet, the walls two feet thick, and the height ten feet, besides the cutting edge, which is of wood, and projects below the main wall one foot. This curb or wall was lowered in a manner similar to the first, until its top was one foot below the surface of the water, giving a depth of twelve feet of water in the well. Work was suspended at this point, as the depth of water obtained was considered sufficient.

The method of making the excavation under water was somewhat novel and entirely successful, reducing the expense of that portion of the work very materially. A cylinder twenty inches diameter, and forty inches long, with a closed top, was made of three-eighths inch boiler iron. The whole was made air-tight except the bottom, which was left entirely open. In the top were two valves opening upward.

The lower edges of the cylinder were made thin and sharp. Attached to the top was a timber or stem six inches square, and eighteen feet long, and at the top of this a suitable attachment was made for a

hoisting apparatus. The tackle of the Derrick was made fast to this and the cylinder was lowered away into the water, the valves were forced open and the air escaped. As soon as the cylinder touched the bottom, the stem of the cylinder was worked backward and forward, thus forcing the cylinder into the sand by its own weight. When full of sand the valves were closed and the whole hoisted out. As soon as the cylinder was lifted above the water it was swung to one side, the valves opened and the contents discharged upon the platform constructed for the men to work upon. The cylinder has a capacity of seven cubic feet, and on an average, five cubic feet of sand was lifted at each time, and a charge could be brought up every two minutes. The apparatus seemed to work as well in sixteen feet of water as in shallow depths.

ENGINE AND PUMP.

The Engine is of the kind known as the Worthington Duplex Pumping Engine; and consists, essentially of two direct acting horizontal engines, by the side of each other; so connected together, that the motion of the one will operate the steam valves and change the motion of the other.

“In the ‘Duplex’ Engine the shock at the change of the stroke, is avoided by the use of two double-acting water-cylinders and two sets of steam-cylinders; the whole so combined as to form one engine, delivering the water into a common air-chamber.”

“Each pump moves to the end of its stroke, and is there compelled to rest absolutely still, for as much time as will allow the water-valves to seat themselves quietly, instead of sending them to their seats violently, by a premature motion. And as this piston ceases its stroke, it communicates motion to the steam-valves of the other side of the engine, so that its pump assumes the work where the first laid it down, and continues it with such uniformity that the indicating gauge will show scarcely any variation in the water-pressure. The work requires rest from motion while the valves are closing and the currents subsiding; but in the force main the upward flow must be unimpared and unbroken.”

“When we examine the engine in regard to the quantity of metal in motion, we find no large masses moving, but that the power of the steam, acting direct upon the steam-piston, is transmitted through

the piston-rod to the water-plunger, which is attached to the other end of the same rod, thus acting upon the water without the intervention of a greater mass of metal than the strains absolutely require. The engine being built so as to contain all these strains within itself, the foundations are smaller, and much less expensive, than those required for other classes of engines."

"The capacity of the engine is such, that it will easily deliver into the Reservoir one million gallons in twenty-four hours, through four hundred and sixty-five feet of twelve-inch pipe, at a height of one hundred and sixty feet."

"It is about twenty-five horse-power. It has two double-acting water-pistons; and each piston-rod passes through a high pressure into a low-pressure cylinder, in which the steam is first used at high pressure and afterwards at low pressure. The steam cylinders are to be protected by a steam jacket, and a covering of felt and black walnut; and are provided with balanced steam slide-valves. Steam-water-pressure, and vacuum gauges are attached to the engine, and there is also to be a counter to record the number of strokes."

"There are four single-acting vertical air-pumps, worked by two half-beams. The engine draws the water from the well through a suction-pipe which delivers it into the water-cylinders. This suction-pipe is fitted at its base with a 'foot-valve' to keep it always full of water."

The diameter of the suction-pipe is.....	12 inches.
" " " " water-piston is	14 "
Length of Stroke	17 "
Diameter of the two high-pressure Cylinders.....	14 "
" " " low " "	24 "

"The speed of the engine is from fifty to eighty strokes per minute, as may be desired. The ordinary speed is about sixty strokes with the pressure of the steam forty pounds and the vacuum twenty-five inches."

BOILER.

The Boiler is of the type known as the Horizontal Tubular. It is fifteen feet long, four feet in diameter and contains thirty-nine tubes three

inches diameter. The grate surface has an area of sixteen square feet, and the heating surface of the boiler is seven hundred and fifty square feet. The furnaces are under the shells of the boiler; the fire returning through the tubes. The boiler fronts are entirely of iron, and are very substantial and neat in appearance. The boilers are fed by a small duplex pump.

BOILER HOUSE.

The Boiler House is situated on the surface of the ground near the well, and is constructed of pressed brick with Ohio stone trimmings. The chimney is located at one corner of the house. It is ten feet square at the base and is to be sixty feet high, and has a flue two feet square throughout. The house is completed except the roof, and the chimney is carried up but about forty-five feet.

ENGINE AND PUMP FOUNDATION.

It was necessary to place the Pumps and Engine near the surface of the water in the well, and in order that they might be entirely independent of the walls of the well, which were liable to settlement, it was decided to place them on a platform carried by six cast-iron columns. These columns were made nine inches in diameter with three-fourths inch thickness of metal, and of different lengths. They were cast with flanges on the outside by which the sections were securely bolted together. They were sunk into the sand by a very rapid, cheap and effective method. The sections forming each column were bolted together. A cap was made to fit the top of the column and was securely bolted to it, and in the centre of this was a coupling for a two and a half inch hose. At the bottom another flange was cast with a cone projecting ten inches from its under side with an opening at the point two and a half inches in diameter. The column thus equipped was suspended over the position it was to occupy, and suitable guides provided to ensure its maintaining a vertical position in its descent. A hose was thus attached to the coupling on the cap and connected with a small number-four Worthington pump. The pump was started and water forced in at the top of the column and out at the bottom. As soon as the flow was fully established the column was lowered down. The water escaping into the sand below the column loosened it, and kept it in violent agitation, so that it offered almost no resistance to the sinking, the water escaping alongside of the column to the surface.

These columns, nine inches in diameter, with a bottom flange eighteen inches in diameter, were sunk into the sand from eight to ten feet in

about eighteen minutes, when the columns were at their proper depth. So long as the pumping continued they were loose and easily moved around in the sand; but within three minutes after the pump stopped they were almost as firm as if set in stone, the sand having settled so compactly around them. The method was a complete success, and I see no reason why columns could not be sunk to almost any depth by the same process. Upon the tops of the columns were placed wrought iron beams carrying the floor and pumps. Stone steps were built spirally into the wall of the well to enable visitors to reach the pump platform. A floor has been laid over the well leaving a circular opening twenty feet in diameter. The floor is supported on two isometrical trusses. The entrance to the well is through the Boiler House and a side opening in the wall of the well.

FORCE MAIN.

The Force Main leading from the Pump to the Reservoir is a cast iron pipe twelve inches in interior diameter. Its length is to be four hundred and sixty-five feet, and the elevation of the point at which it delivers the water into the Reservoir is one hundred and sixty feet above the level of the water in the well, and one hundred and seventy-three feet above tide level. The main was made with bell and spigot joints, the bells being five inches deep, and the lead joints were made only three and one-fourth inches deep, the balance of the space being filled by a hempen gasket.

The force main delivers the water into the Reservoir just above its high-water line. The object in pumping to this height rather than into the bottom of the Reservoir is to insure a uniform pressure on the pumps. In the force main near the pump is placed a check-valve. This is a self-acting arrangement by which the pressure of the water in the main is prevented from acting on the pumps while they are not in motion, and consists of an inclined partition across an enlargement of the pipe, with valves on the upper side, which are opened as the water is forced through them from the pumps, and which are closed by the pressure of the water in the pipe above them. At a distance of eighty-three feet from the well, and at an elevation of about sixty-one feet above the surface of the water in the well, there is a branch connecting with a fifteen inch vitrified pipe which leads to the lake near the proposed site of the Refectory. This branch will be used when it is required simply to fill the lake.

At a distance of one hundred and fifty-four feet from the well, and at an elevation of ninety feet above the water in the well, is another

branch connecting with a twelve inch cast-iron pipe leading around the base of Look-out Hill to the uppermost of a series of pools. This pipe delivers the water at an elevation of one hundred and twenty-four feet, and will be used when a supply of water is to be furnished to the pools and cascades situated in the Ambergill and Nethermead districts.

It will thus be seen that the water from the well can be delivered at elevations of sixty-one, one hundred and twenty-four, or one hundred and sixty-feet, as the case requires, thus reducing the work and cost of pumping to its minimum.

The water from the Reservoir will be taken into the pipe distribution system to be used at the hydrants, drinking fountains, &c., at different points on the Park. This will constitute but a small proportion of the water required on the Park. By far the largest quantity will be required to supply the loss from the lake, due to evaporation from the surface and leakage from the bottom. This water may be used to produce pools, cascades, rapids, and running brooks before it empties into the lake.

SOURCE OF WATER SUPPLY FOR THE WELL.

The ground on that portion of the Park lying south of the hills, and in fact all of the south side of Long Island is one vast bed of sand, which is generally covered by but a few feet of soil and loam. On account of this peculiar formation, a large proportion, probably sixty per cent. of the rain fall is absorbed and passes down to what is popularly known as "the main spring." This is a body of water filling the sand and extending under this whole district. The distance from the surface of the ground to the surface of this body of water depends upon the modulation of the ground; but the elevation of this water surface above tide level is quite uniform for equal distances from tide water, and depends upon that distance; it rises about seven feet per mile—so that, for instance, at any point two miles from tide water the surface of this subterraneous reservoir will be about fourteen feet above tide level. The slope being known, it becomes an easy matter to calculate with great certainty the quantity of water which can be obtained from the well.

The rain fall averages something over forty inches per annum, but assuming it to be forty inches, then sixty per cent. of this, or twenty-four inches in depth of water will reach the main spring. This quantity over a circle with a radius of one half a mile will give a daily supply of about nine hundred thousand gallons. To draw this supply of water to the well from a distance of one half a mile it will be necessary

to pump the water down to a depth of about three and a half feet, and this will allow the water to take the regular slope of about seven feet per mile. The water in the well is twelve feet deep and can readily be pumped down seven feet, and this will draw water from nearly a mile in every direction. There is therefore an abundant supply of water within reach of the well, and the only remaining question was, could the requisite amount be pumped out without bringing in with it the sand in the bottom and around the well and thus fill it up. This last question was set at rest by actual observation during a trial of the pump. It was found that when the water in the well was drawn down four and a half feet water came in at the rate of 850,000 gallons per day, without in the least disturbing the sand in the bottom. This was on the third day the pump was run; and the rate of flow of the water towards the well will increase as pumping is continued, for the subterraneous channels will arrange themselves in directions towards the well. No doubt the bottom could be brought in and the well ruined by suddenly pumping the water down eight or ten feet—but if it were drawn down even to that depth gradually no damage would occur. *The water must not be drawn down more than four and a half feet suddenly, as it cannot be done safely.*

PORT GREENE.

The work on Fort Greene has been steadily pressed during the season, and a large proportion of it is completed. The walks laid last year are in good order, and a large amount in addition have been laid this season. Mr. T. P. Kinsley remained in charge of the work as Engineer until it was suspended in November. Mr. F. Mollard performed the duties of General Foreman during the continuance of the work.

On Prospect Park, the organization of the Engineer Department remained essentially as at the last report, during the season, until the suspension of work in November, when the Engineer corps was reduced to correspond with the reduction of the labor force. For the Park Statistics you are respectfully referred to the reports of the Assistant Engineers-in-charge, herewith presented.

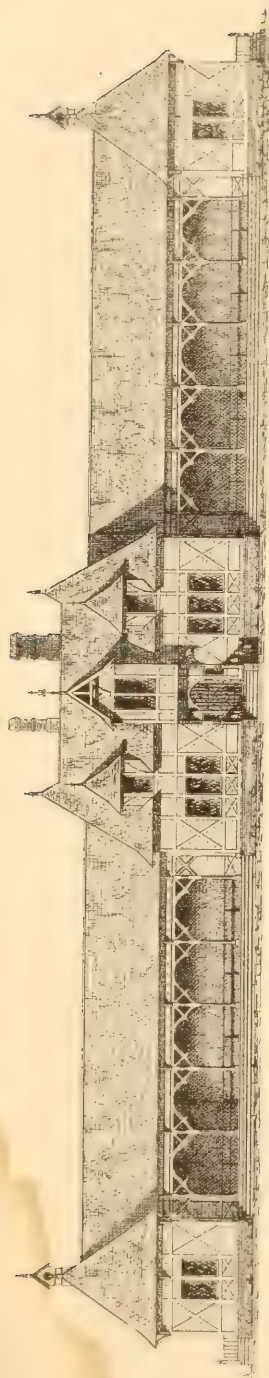
The Assistant Engineers-in-charge, Mr. John Bogart and Mr. John Y. Culyer, have performed the duties of their respective departments with skill and fidelity.

Respectfully submitted,

C. C. MARTIN,

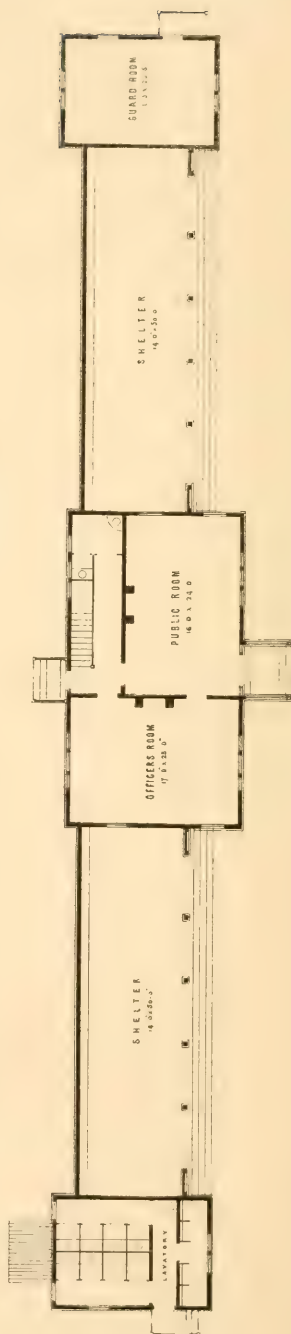
Engineer-in-Charge.





FRONT ELEVATION

LODGE AND SHELTER - KINGS COUNTY PARADE GROUND



GENERAL PLAN

OLMSTED VAUX & CO LANDSCAPE ARCHITECTS

R E P O R T

OF

JOHN BOGART, ASSISTANT-ENGINEER-IN-CHARGE.

PARK COMMISSION, CITY OF BROOKLYN,

ENGINEER'S OFFICE, JANUARY 1st, 1870.

C. C. MARTIN, ESQ.,

Engineer-in-Charge.

SIR:

I submit herewith the following tabular statistics of construction of the Brooklyn Parks, up to January 1st, 1870.

DRIVES.

Drives finished, 60 feet wide,	379 lineal feet.
" 52 "	277 "
" 50 "	1,441 "
" 46 "	5,546 "
" 40 "	12,423 "
" 30 "	1,500 "
" 27 "	1,610 "
" 23 "	1,550 "
" 50 " (Franklin Avenue.)	1,860 "

Total length of Drive finished, 26,586 "

or 5 4-100 miles.

Drives in progress, 60 feet wide,	75 lineal feet.
" " 50 "	200 "
" " 40 "	1,610 "

Total, 1,885 "

or 36-100 miles.

CONCOURSES.

Finished Concourse for carriages—Plaza,	272,442	sup. feet.
“ “ “ Park,	119,350	“
“ “ for pedestrians, Plaza,	26,742	“
“ “ “ Park,	59,300	“
“ “ “ Fort Greene,	78,832	“
“ “ “ Parade Ground,	18,000	“
Total area of finished Concourse,	574,666	“

or 13 19-100 acres.

Concourse in progress, for carriages — Plaza,	3,000	sup. feet.
“ “ “ Park,	200,000	“
“ “ for pedestrians—Park,	80,000	“
“ “ “ Fort Greene,	93,960	“
“ “ “ Parade Ground,	4,000	“
Total,	380,960	“

or 8 75-100 acres.

RIDES.

Rides finished, 20 feet wide,	3,000	lineal feet.
“ 16 “	625	“
“ 15 “	2,050	“
“ 8 “	600	“
Total length of ride finished,	6,275	“

or 1 19-100 miles.

Rides in progress, 20 feet wide,	2,975	lineal feet.
“ 15 “	900	“
Total,	3,875	“

or 73-100 miles.

WALKS.

Walks finished, 20 feet wide,	408	lineal feet.
“ 16 “	15,540	“
“ 14 “	400	“
“ 12 “	8,875	“
“ 10 “	760	“
“ 8 “	450	“
“ 52½ “ Fort Greene,	108	“
“ 16 “ “	570	“
“ 14 “ “	3,667	“
“ 12 “ “	1,831	“
“ 10 “ “	598	“
“ 8 “ “	505	“
“ 8 “ Carroll Park,	2,275	“
Total length of finished Walks,	35,987	“

or 6 82-100 miles.

Finished Walk at Prospect Park,	5	1-100 miles.
“ at Fort Greene,	1	38-100 “
“ at Carroll Park,	43	100 “
Walks in Progress, 30 feet wide,	5,396	lineal feet.
“ 25 “	2,175	“
“ 20 “	7,137	“
“ 16 “	1,775	“
“ 12 “	1,900	“
“ 10 “	885	“
“ 8 “	850	“
“ 52½ “ Fort Greene,	365	“
“ 16 “ “	150	“
“ 14 “ “	797	“
“ 12 “ “	50	“
“ 10 “ “	35	“
	<u>21,515</u>	“
	4	7-100 miles.

DRAINAGE.

18 inch vitrified pipe laid,	1,692	lineal feet.
15 “ “	7,899	“
12 “ “	9,144	“
10 “ “	1,947	“
8 “ “	8,988	“
7 “ “	305	“
6 “ “	19,813	“
5 “ “	1,619	“
4 “ “	2,496	“
2½ “ “	675	“
10 “ “ Fort Greene,	315	“
8 “ “ “	680	“
6 “ “ “	2,066	“
5 “ “ “	1,234	“
4 “ “ “	2,707	“
6 “ “ Carroll Park,	97	“
4 “ “ “	310	“
6 “ cement pipe laid,	142	“
Total,	<u>62,129</u>	“
	or 11	77-100 miles.

Tile pipe laid, 3 inch,	19,345	lineal feet.
“ 2½ “	25	“
“ 2 “	27,110	“
“ 1½ “	7,332	“
Total,	<u>53,812</u>	“
	or 10	19-100 miles.

WATER DISTRIBUTION.

Wrought iron and cement pipe, 16 inch.....	3,023	lineal feet.
“ “ 12 “	2,548	“
“ “ 6 “	10,550	“
“ “ 4 “	3,351	“
Total,.....	19,472	“

or 3 69-100 miles.

Cast iron pipe, 20 inch,.....	347	lineal feet.
“ 16 “	29	“
“ 12 “	2,515	“
“ 8 “	191	“
“ 6 “	43	“
“ 4 “	8	“
“ 3 “	53	“
“ 2½ “	10	“
“ 1½ “ galvanized,.....	450	“
“ 1 “ “	1,427	“
Total,.....	5,073	“

or 96-100 miles.

Lead and tin pipe, $\frac{3}{4}$ inch,.....	802	lineal feet.
“ “ $\frac{1}{2}$ “ Fort Greene,.....	294	“
“ “ $\frac{3}{8}$ “ “	1,064	“
Total,.....	2,160	“

or 41-100 miles.

Blow-offs and Branches,	74
Stop cocks,	38
Air cocks,	12
Hydrants,	33
Reducers,	4
Metres,	2
Stop cocks—Fort Greene,	11

Gas pipe laid, 4 inch,.....	700	lineal feet.
“ 3 “	88	“
Total,	788	“

or 15-100 miles.

Iron fence set—Fort Greene,	703	lineal feet.
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AREA OF OPERATIONS UP TO JANUARY 1ST, 1870.

Area worked over up to January 1st, 1870,.....	352½ acres.
“ “ “ Fort Greene.....	30 “

Surface finished, meadows and slopes,.....	153 acres.
“ woodland,.....	40 “
“ water surfaces,.....	14 “
“ roads and walks,.....	48 “
Total,	<u>255.</u> “

Surface seeded,.....170 acres.

Surface finished—Fort Greene,..... 22 acres.

MASONRY.

Amount of Brick Masonry.....	2,922 cubic yards.
“ “ “ Fort Greene.....	75 “
“ Stone masonry	5,986 “
“ “ Fort Greene	89 “
“ Concrete	1,758 “
“ “ Fort Greene.....	57 “
“ Steps set.....	4,779 lineal feet.
“ “ Fort Greene	214 “
“ Curb set	67,624 “
“ “ Fort Greene	677 “
“ Belgian pavement laid	295,152 sup. feet.
“ Cobble pavement laid.....	52,816 “
“ Brick pavement laid	20,520 “
“ Brick gutter laid	20,268 “
“ Telford gutter laid	49,709 “
“ Cobble gutter laid	15,880 “
“ Flag stone gutter laid.....	6,760 “

Tar concrete pavement laid.....	360,136 sup. feet.
“ “ “ Fort Greene.....	176 944 “

AMOUNT OF STONE BROKEN.

McAdam stone by stone-breaker	16,214 cubic yards.
Telford and building stone by hand.....	8,943 “
“ “ “ Fort Greene.....	2,569 “
Spall-stone by hand	12,920 “

MATERIAL MOVED.

	During 1869	Total to Jan. 1, 1870.
For grading and shaping drives, rides, walks, meadows and slopes.....cubic yards,	144,844.....	416,370
For lakes, pools and streams.....	" 126,136.....	481,058
For Plaza	"	172,355
For sewers, drains and water distribution ..	" 32,678.....	85,842
Soil.....	" 80,760	410,772
Peat	" 20,546.....	66,566
Clay.....	" 2,274.....	30,150
Manures and compost	" 10,700.....	36,100
Stone....	" 19,305.....	83,266
Gravel and sand	" 25,147.....	85,367
Miscellaneous.....	" 3,822.....	18,446
	<hr/>	<hr/>
Total cubic yards	466,212.....	1,886,292
	<hr/>	<hr/>
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Material moved at Fort Greene.....	32,532.....	89,914
Total cubic yards	498,744	1,976,206
	<hr/>	<hr/>

ENGINEER CORPS.

The Assistant Engineers, Mr. Wilson Crosby, and Mr. James C. Aldrich, at Prospect Park, and Mr. T. P. Kinsley at Fort Greene, have been actively and efficiently engaged in the immediate supervision of the Engineer Corps during the season.

Respectfully submitted,

JOHN BOGART,

Assistant-Engineer-in-Charge.



TREE MOVING MACHINE.—PROSPECT PARK.

SIDE ELEVATION.

Olmsted, Vaux & Co., Landscape Architects.

REPORT

OF

JOHN Y. CULYER, ASSISTANT-ENGINEER-IN-CHARGE.

PROSPECT PARK,

BROOKLYN, Dec. 31st, 1869.

C. C. MARTIN, ESQ.,

Engineer-in-Charge.

DEAR SIR:—

You will find herewith a report of the means and materials employed in the construction and maintenance of the several Parks under the jurisdiction of the Commission, for the year ending December 31st, 1869, together with an inventory of tools and supplies, and the statistics of the force, and other details, for the same period.

FORCE.

During the working season the average of men employed was 813, being a less force than has been engaged during any previous season of the same duration.

The work has been prosecuted mainly within the district lying on the Westerly side of the Park area, commencing with the unfinished ground near the main entrance on the Plaza, then running parallel with Ninth Avenue, and including the main West or Circuit Drive, through the Litchfield and adjoining properties, and also comprehends the construction of the Drive to Lookout Hill, the Nethermead Arches, and work on adjoining territory.

In addition to this, a large amount of work was done in the Lake District during the early part of the year.

A considerable force of masons and stone-cutters was employed upon the construction of Meadowport and Nethermead Arches, the Well, Boiler House and Fountain Basin, and the stone-work of the Frame House.

A force of carpenters was employed to complete the wood-work of Lullwood Bridge, the Farm House, the Well, the temporary Bridge connecting the Drive from Vanderbilt Hill with Breeze Hill, and also on a large amount of current detail labor incident to the general progress of the work.

The following statement shows the average number of employed force during each month of the year, and also for the preceding years since the organization of the work in 1866:

STATEMENT SHOWING THE AVERAGE NUMBER OF EMPLOYED FORCE FOR THE MONTHS AND YEARS NOTED.

Year.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sep.	Oct.	Nov.	Dec.
1866.	Active operations commenced on the Park in the latter part of the month of June, 1866.					300	335	450	550	620	700	725
1867.	700	630	410	800	1000	1150	1200	1525	1750	1825	1800	1100
1868.	944	812	508	1215	1047	1189	1095	1090	1116	1118	1167	912
1869.	740	698	746	946	959	988	991	1006	975	946	552	204

The following is an exhibit of the days during which the main force was employed, and of the days when the weather partially or entirely prevented the prosecution of the work.

Whole number of full days when the main force was employed.....250
 Whole number of days when the weather interrupted the work..... 57

FORT GREENE.

The work at Fort Greene has been prosecuted during the past year under the direction of our Assistant Engineer, our General Foreman of field work, and a small force varying from 35 men in January and February, to an average of 60 or 70 during the summer and early fall season.

The work was entirely suspended Nov. 10th. In January, February and March, one Foreman, with one gang of men, was employed. Subsequently two Foremen and two gangs of men were engaged until the close of the season. The period covered represents 269 working days. During this time the work was interrupted by storms on 50 days. The following table shows the average number employed at Fort Greene, by months, during the years 1868 and 1869:

Year.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1868.	Work begun June, 1868.					96	89	133	136	139	132	72
1869.	36	35	41	80	79	69	68	61	66	58	50	Work suspended

ORGANIZATION.

The force for the year was made up as follows:

FOR GENERAL CONSTRUCTION WORK.

One General Foreman.

Two Assistant General Foremen.

Nine Barrow Gangs (one at Fort Greene) average 32 men each.

Six Cart Gangs (one at Fort Greene) average 20 men each, 25 Carts.

Two Team Gangs, average 20 men each, 25 Teams.

One Stone-breaking Gang, average 8 men each.

Three Miscellaneous Gangs, average 40 men.

Of this force 12 men, 1 team and 5 sprinkling carts were required for the work of maintenance, cleaning of roads, basins and water ways: to which is added a force of Gardeners in the Spring and Summer, for the care of shrubbery, mowing, &c.

MECHANICAL FORCE—STONE-CUTTERS, STONE AND BRICK MASONS.

One General Foreman.

One Foreman of Stone-Cutters, 45 Stone-Cutters.

Two Foremen of Stone-Masons, average 15 Masons each.

One Foreman of Brick-Masons, 9 Brick-Masons,

CARPENTER AND BLACKSMITH FORCE.

One Foreman of Carpenters, 21 Carpenters.

One Foreman of Rustic Work, 4 Rustic Carpenters.

One Foreman of Blacksmiths, 5 Blacksmiths, 5 Helpers.

PLANTING AND GARDENING FORCE.

One Foreman.

Eight Master Gardeners.

Fifteen Skilled Laborers.

One hundred and fourteen Laborers.

The Gardener's force is under the supervision and direction of the Park Inspector, Mr. O. C. Bullard.

The division and arrangements of labor remain the same as heretofore, as does also the keeping of time and accounts of work, and of complete vouchers and records.

DISCIPLINE.

The following is an abstract of the record regarding promotions, suspensions and discharges occurring during the year :

APPOINTMENTS AND PROMOTIONS.

Number of Foremen appointed.....	1
Number of Laborers promoted to Assistant Foremen.....	1
Number of Assistant Foremen promoted to Foremen.....	1
Resignation of Foremen.....	2

SUSPENSIONS.

Number of Assistant General Foremen suspended for infraction of rules.....	1
Number of Foremen suspended for breach of discipline.....	8
Number of Assistant Foremen suspended for breach of disci- pline.....	4
Number of Laborers suspended for breach of discipline.....	155

DISCHARGES.

Number of Foremen discharged for breach of discipline.....	2
Number of Assistant Foremen discharged for inefficiency.....	1
Number of Laborers discharged for inefficiency.....	357
Number of Laborers discharged for intoxication and neglect of duty.....	49

ACCIDENTS.

Six laborers were injured on the work, and two died in consequence of injuries they received. A small boy was run over and killed by a truck belonging to a contractor.

A number of cases of sun-stroke occurred during the extreme heat of the summer, none of which resulted fatally, owing, it is believed, to the prompt application of the remedies provided by the Commission for such cases.

KEEPERS, AND PUBLIC USE OF THE PARKS.

This force, as organized the preceeding year, remained unchanged up to November 30th, when, in consequence of the general suspension of work on the Park, a temporary reduction was made in the number employed.

The force consists of two Head Keepers, one Station officer, six Wardens, sixteen Range Keepers, and thirty Post Keepers.

A reduction was made November 30th, of two Wardens, four Range Keepers, and six Post Keepers, together with six subordinate employées.

The service has been distributed as follows :

- 16 Rangers, Prospect Park.
- 24 Post Keepers, Prospect Park.
- 3 Post Keepers, Fort Greene.
- 2 Post Keepers, Carroll Park.
- 1 Post Keeper, City Park,

and comprehends a daily inspection by a Head Keeper of all the smaller Parks under the jurisdiction of the Commissioners.

It is to be observed in this connection that the area now made use of by the public is much larger in extent than it was last year, and

that the number of visitors making use of the Park is greatly in advance of last season, the natural result being that the duties and responsibilities of the Keeper force have been proportionately increased.

During the year one Ranger and two Post Keepers have resigned. Two Post Keepers have been promoted to the grade of Range Keepers. One death has occurred in the grade of Post Keepers. Five Range Keepers and nine Post Keepers have been suspended for breach of discipline. Two Range Keepers and ten Post Keepers have been discharged for neglect of duty and inefficiency.

ARRESTS.

Thirty-three arrests were made during the year, of which the following is a summary :

For fast driving.....	4
For injuring trees and shrubbery.....	2
For disorderly conduct and intoxication.....	23
For interfering with Keepers.....	3
For violation of ordinance on Fort Greene.....	1

Besides the above a number of minor offences were disposed of by caution or reprimand, by the Station Officer, or the Keeper under whose observation they occurred.

Twelve lost children were restored to their homes.

IMPOUNDED ANIMALS.

The annoyance resulting from cattle, goats and swine running at large, is abating. One hundred and fifty-four animals were impounded, which were redeemed by their owners on payment of fines and charges, or sold to pay expenses.

PUBLIC USE OF THE PARKS.

During the year records have been made of the number of people visiting the Park, and the results in detail will be found in the following statement. The whole number for the year is 2,958,539, which is 822,197, or 38 per cent. in advance of last year.

A marked increase in the number of persons driving in the Park is also noticeable, 714,240 vehicles having entered the Park.

This is 292,642, or 69 per cent. in advance of the preceding season.

STATEMENT SHOWING THE NUMBER OF VISITORS AT PROSPECT PARK
DURING THE YEARS 1868 AND 1869.

	Vehicles.		Equestrians.		Pedestrians.		Total Visitors.	
	1868.	1869.	1868.	1869.	1868.	1869.	1868.	1869.
January.....	11,440	36,719	1,301	4,031	62,012	73,500	94,443	187,688
February.....	16,476	37,888	510	49,60	42,504	81,761	90,982	150,385
March.....	16,085	43,740	3,304	6,380	27,281	32,820	75,933	170,420
April.....	19,089	53,430	5,287	4,671	25,942	45,125	88,502	210,086
May.....	38,871	75,636	7,623	11,242	69,478	65,049	194,457	303,199
June.....	65,485	82,620	8,825	7,884	102,544	87,441	308,988	343,185
July.....	52,877	68,226	5,214	5,133	98,967	102,203	266,821	312,014
August.....	51,133	80,339	6,369	4,270	117,425	91,315	277,193	336,602
September.....	37,349	70,717	4,863	5,072	60,322	74,667	177,242	291,890
October.....	49,684	80,417	8,329	7,163	72,325	98,305	229,942	346,719
November.....	44,909	50,073	10,113	5,847	44,027	29,091	188,247	185,157
December.....	18,200	34,435	3,180	3,101	86,056	14,788	144,042	121,194
	421,598	714,240	64,918	69,754	808,383	746,065	2,136,792	2,958,539

The largest number of visitors on any one day was 41,425, October 24th.

720,888 persons visited the Park on Sundays.

69,754 equestrians have made use of the Park. This is 4,836 in excess of the preceding year.

About two and a half miles of new drive was opened to public use simultaneously with the inauguration of the Lincoln Statue, October 21st. 32,439 persons entered the gates of the Park on that day. In addition to these, several thousand persons witnessed the ceremonies at the Plaza, without entering the Park.

During the year a piece of ground, one and one-third acres in area, was prepared and set apart for velocipede riders. Velocipedes were also permitted on the walks of the Park, but no great use was made of either of their privileges, and beyond the occurrence of several slight accidents, there is nothing to record in regard to this branch of the public amusement.

In the early fall, the turf upon the most of the larger open spaces of the Park, having become firm and close, the public was allowed free range over it. The privilege gave great satisfaction to many, and was not found inconsistent with the maintenance of good order or the preservation of the turf.

During the summer and fine fall weather, the West Woods were in constant use for large social parties and the pic-nics of friendly associations, Sunday Schools, Church and Temperance Societies. There have been two hundred of these during the season. In addition a large number of smaller family festivals were noted. The use of these grounds, and of the privileges thus accorded to visitors, has been marked by good order and a ready compliance with established regulations. Tables, seats and swings were provided, as heretofore, without charge. No accident has occurred.

PARADE GROUND.

This ground has been in good serviceable condition during the season, frequent mowings having rendered the turf strong and compact. There have been twelve Parades, one Division Parade, three Brigade Parades, and eight Regimental and Battalion Parades. The grounds have also been made use of by about fifty Cricket, Base Ball and La Crosse Clubs.

SKATING.

There were twenty-two days of skating this year, as follows: Sixteen in January, two in February and four in March. The Pond area, obtained by a temporary dam across the incompleated excavations of the lake, in use for skating was twelve acres. A new movable house with convenient accommodations for the public, 168 feet by 28 feet was provided; during this period 75,000 visits were made to the Pond.

TREES AND SHRUBS.

The following statements show the number of deciduous trees, shrubs, evergreens, etc., purchased; also the stock on hand, together with the number that have been planted during the year.

ON PROSPECT PARK.

STATEMENT SHOWING THE NUMBER OF TREES, SHRUBS, ETC., RECEIVED
DURING THE YEAR ENDING DECEMBER 31ST, 1869.

Deciduous Trees.	Deciduous Shrubs.	Evergreens	Vines.	Ferns.	H'rbaceous Plants.	Bedding. Plants.	Aggregate.
5.787	8.167	19.784	852	2.600	2.696	282	40.168

STOCK IN NURSERY, DECEMBER 31ST, 1869.

Deciduous Trees.	Evergreens.	Deciduous Shrubs.	Vines.	H'rbaceous Plants.	Ferns.	Aggregate.
22.130	32.834	44.525	3.707	1.492	3.000	10.7688

STATEMENT SHOWING THE NUMBER OF TREES, SHRUBS, ETC., SET IN
PERMANENT PLANTATIONS DURING THE YEAR.

Deciduous Trees.	Evergreens	Deciduous Shrubs.	Vines.	H'rbaceous Plants.	Ferns.	Bedding Plants.	Aggregate.
3.030	9.386	17.786	2.634	6.814	3.360	282	43.292

Fifty-two deciduous trees of fine character and five deciduous shrubs were presented by Mr. Henry Struybring. Five deciduous trees, twenty-six deciduous shrubs, and eight ever-greens, by Mr. S. R. Trowbridge. One very fine American elm by Mr. Cooper.

FORT GREENE.

STATEMENT SHOWING THE NUMBER OF TREES, SHRUBS, ETC., PLANTED
AT FORT GREENE DURING THE YEAR.

Deciduous Trees.	Deciduous Shrubs.	Evergreens.	Vines.	Herbaceous Plants.	Aggregate.
1,079	6,357	3,721	108	52	11,317

Seven shrubs and two other plants were presented by Mrs. Burtis.

CARROLL PARK.

STATEMENT SHOWING THE NUMBER OF TREES, SHRUBS, ETC., PLANTED AT
CARROLL PARK DURING THE YEAR.

Deciduous Trees.	Evergreens.	Deciduous Shrubs.	Vines.	Aggregate.
9	25	308	19	361

A choice selection of deciduous shrubs and evergreens, imported from England, were received in excellent condition. A part of these is included among the stock planted this season, and the remainder form a part of the stock on hand for future operations.

Two large trucks, especially adapted to the moving of large trees, were constructed on the work in 1867, and have been in successful and constant operation in the seasons proper for such work since that time.

Between five hundred and six hundred trees, ranging from four inches to seventeen inches diameter, measured three feet from the ground, have been taken up and transplanted from one to another point more or less distant on the Park or from the outside, with entire success. Not more than six have died that have been thus moved.

The largest tree moved measured seventeen inches in diameter at three feet from the ground, and weighed with the ball of earth attached to the roots fifteen tons. It was carried a distance of half a mile, and so far as its present appearance indicates, without material injury.

GENERAL STATISTICS.

The following is a list of structures, &c., completed or advanced in construction during the year. The Nethermead Arches, of Ohio sandstone and Quincy granite, 108 ft. 6 in. long, and 56 ft. 6 in. wide, comprising three Arches, two each of 20 ft. span, and a central span 22 ft. The Meadowport Arch, of Ohio sandstone, 83 ft. 6 in. in length, 20 ft. span, with groined arch 30 ft.

The Lullwood Bridge, at the north end of the lake, 90 ft. span, 20 ft. wide, constructed of white oak on granite piers and abutments.

One Locust Rustic Bridge, over the Binnen-water, 35 feet span and 16 feet wide.

One Rustic Arbor, on the east shore of the lake, 111 feet in length, 16 feet wide and 8 feet high.

One temporary bridge over the lake, of pine and spruce, connecting the line of drive from Breeze Hill to Look-out Hill, 36 feet wide, and 208 feet span, 22 feet above the level of water in the lake.

One temporary building, 40 by 60 ft., for pattern room for bridge-work and other structures.

The Farm-House is completed.

THE WELL.

The curbs are completed and in position; a covering placed on the same, and the railing around the opening and on the platform and steps in the well is in progress.

A boiler-house 42 ft. 6 in. by 20 ft. 6 in., with chimney 8 ft. 6 in. at base, of Croton brick and Ohio stone trimmings, has been partially constructed, and work interrupted by frost and suspended.

THE FOUNTAIN.

The granite for the steps, platform and coping, for the Fountain basin at the Plaza, have mainly been delivered by the contractor, and are in part in place in the work.

Three flag-staffs, 70 feet high and 17 inches in diameter at the base, have been permanently set in their position at the Plaza; and three large flags, 30 ft. by 40 ft., severally bearing emblems and the mottoes of the United States, the State of New York and City of Brooklyn, have been prepared for use on public occasions and holidays.

PARK FURNITURE.

Fifty-two rustic-seats of sassafras and cedar have been made and placed about the Park.

Two canvas field umbrellas, with camp chairs, were placed on the turf near the Children's Play-ground.

There have been added to the furniture of the Park—

26 Rustic ordinance stands,

800 Rustic bird houses,

75 Park settees of iron and wood, each 7 feet long,

30 “ “ “ “ 5 “

30 “ “ “ “ 4 “

One new drinking fountain of granite.

During the past season two temporary places for refreshment, established the preceding season, and found to extend desired facilities to the public, were continued.

Numerous water-stations were established, to which fresh cool water was supplied.

The swings and scups in the East and West woods have been kept in repair, and have been in constant use during fine weather.

The birds peculiar to the woods of this section, secure from annoyance, are already increasing in numbers upon the Park quite noticeably. The English Sparrows are familiar visitors, and numbers of them are becoming permanent lodgers on the Park.

PARADE GROUND.

A shelter-house, with suitable accommodations for the use of the Military of Kings County, was erected during the year, of the following dimensions:—

Main building, 40 ft. by 40 ft.

Two wings, each 50 ft. by 14 ft.,

with additions to the same on each end, 14 ft. by 20 ft. ; the whole covering an area of 3,560 superficial feet.

FORT GREENE.

A trellis of worked timber has been constructed at this park, on the hill, 200 ft. by 200 ft., 14½ ft. in height in centre, and 12½ ft. in the wings, and contains under shelter 48 seats, each 16 ft. 8 in. long ; one drinking fountain of granite ; also two additional drinking places were provided, to which cool water was constantly supplied during the summer. Two temporary water-closets and one urinal were erected.

Two hundred and thirty feet of new iron fence was placed on the boundary line of the Park and Hospital property.

CITY PARK.

Eight gate entrances at this Park have been re-arranged and new gates supplied.

SUPPLIES.

Tools, Implements, and Machinery.

From the accompanying statement of material received and used on the work, and now in stock, it will be seen that there is now on hand a large general supply of tools and implements for future operations. Of the more expensive appliances, such as derricks, derrick-gearing, trucks, road-rollers, &c., the supply is in excellent condition, and will be sufficient for any ordinary future demands of the work.

A Steam Road Roller of fifteen tons weight was received from England in good order, and has been in use during the latter part of the year.

One ten ton wall-builder for moving stone was purchased.

STONE AND BRICK.

During the season 315 cubic yards of foundation stone have been received.

1,763 cubic feet of Ohio sandstone,	} Selected stone, quarried, and worked to dimensions.
9,000 " " Maine granite,	
1,785 " " Quincy granite,	

A supply of brick for the completion of the Reservoir is on hand.

GRAVEL.

8,342 cubic yards of gravel was purchased; 7,342 cubic yards of this was used for construction, with 1,000 yards required for maintenance.

HORSES, ETC.

There are eight horses belonging to the Commission, six of them are in daily use on the field as teams, and two for general use of the officers of the Park, and are in good working condition.

In view of the accumulation of machinery, implements, and supplies needed for current and general demands of the work, the selection and use of a permanent site for storage yard is desirable.

ANIMALS AND BIRDS.

The following animals and birds were presented to the Commissioners:—

One Camel,	One Fox,
One Peccary,	One Eagle,
One Hawk.	

Not having suitable accommodations for them, they were temporarily transferred to the care of the Central Park Commissioners, in accordance with an understanding that leaves them subject to withdrawal whenever it may be deemed desirable to establish a zoological collection on the Brooklyn Park.

FERTILIZING MATERIALS.

Statement of manure and fertilizing material, received and on hand.

PROSPECT PARK.

338 two-horse loads horse manure.

FORT GREENE.

122 two-horse loads horse manure,

1,978 one " " street "

PROSPECT PARK.—STATEMENT OF MATERIAL ON HAND.

Stable Manure	Compost,	387	cubic yards,
Night-soil,	"	2,314	" "
Fish,	"	420	" "
Peat and Lime	"	11,373	" "

FORT GREENE.

Stable Manure Compost, 267 cubic yards.

METEOROLOGY.

The system of Meteorological observations which was begun in the month of July, 1868, has been continued throughout the year. These have been made and recorded three times daily.

The extent and thoroughness of such records depend largely upon the completeness of the system, and character of the instruments used. Our supply has been only partial, and the observations taken were necessarily incomplete, though entirely reliable to the extent afforded by the instruments. With reference to the Commission these records would appear to have little value, but the constantly growing interest throughout the country, in this popular branch of science, at once suggests the importance of the subject.

Successful agriculture and other industries depend largely upon the conditions of the atmosphere and temperature. Meteorology alone affords us an intelligent comprehension of these phenomena. Data, compiled from its observations, are regarded by the scientific as among the most valuable contributions to the statistics of the country. Progress in the science is to be mainly anticipated from study at the office established for that purpose at Washington, of accurate records of observations made simultaneously at a very large number of stations in all parts of the country.

The situation of the Park, and the character of its organization, make it by far the best station for the purpose in this vicinity. The apparatus at present in use is very simple and incomplete. If the Commission should think proper to appropriate five hundred dollars to its enlargement and improvement, the observations which might be taken without any additional current expense, would be of much higher value.

A faithful and intelligent attention to duty has characterized the services of the several assistants employed in my department.

Respectfully submitted,

JOHN Y. CULYER,

Assistant-Engineer-in-Charge.

